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PEABODY JOURNAL
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VOLUME 5 JANUARY 1928 NUMBER 4

PHILOSOPHY AS SPONSOR FOR EDUCATION

CHARLES A. McMURRY
George Peabody College for Teachers

Philosophers belong to that small band of supermen who have specialized in wisdom. To discover the plan upon which our universe is built has been the supreme task of these men and their absorbing passion. The energy of powerful minds has been turned loose upon this world riddle, and truth of high importance has been brought to light.

Philosophers hold a place in the world's respect higher than princes and kings, because they rule in that upper empire of the mind, and their reign is not for a brief span of years. They have allowed their acquisitive intelligence a deeper and wider range than other men, than many even who in their day have been reputed wise.

As educators, we may well cultivate an intimate acquaintance with these highly gifted men. We, too, have some thirst for wisdom even of this higher sort. Our very choice of a profession points in that direction. It is the business of teachers to turn children into the paths of wisdom and to cultivate in them a taste for those virtues that are the better part of wisdom. The childlike simplicity of great minds may well fit our purposes in teaching. They may both moderate and stimulate our thinking. Those who are trying to find the basis for implanting the beginnings of wisdom in early childhood are working at the right spot. They are engaged in an enterprise that the wise men would regard as deeply significant.

The foremost philosophers, such men as Plato and Locke, were teachers. Some of them were tutors in private families. Kant and Herbart, for instance, were family teachers of this early primitive

sort. Others were instructors of children in school classes. Most of them became lecturers and professors in higher schools and universities. Of this class were Abelard, Erasmus, Melanchthon, Fichte, Schiller, Hegel, and others. Their individuality comes to a full expression in original and even unique modes of teaching. Socrates disputed with small groups upon the street or in the market place. Plato conversed with his disciples in the academy. Savonarola thundered from the high pulpit of St. Mark's. Luther engaged Dr. Eck in public debate. Aristotle frequented the walks of the Lyceum. Herbart lectured to a room full of students who broke into applause. Thomas Arnold gave to his boys long-remembered chapel talks.

Plato thinks the world will be set right when rulers and kings are turned into philosophers. In the *Republic* he has a scheme for working out this result, but before this happy day can come a plan must be devised by which the people can be instructed and the more gifted children from among the people sifted out and developed into philosophers; for even philosophers must be discovered in the rough, and educated. Plato knows also that the education of a philosopher is a long and circuitous road to travel. A yet greater task remains to educate the people into a state of mind in which they are willing to select and prefer philosophers for their rulers. This plan implies a third and still greater difficulty. It presupposes a plentiful supply of good teachers already at hand. Where are they to come from? Who is to select and educate the teachers of the philosophers? All such grand schemes of progress are brought to a sudden halt by their demand for a complete system of education already established on a sound basis and in complete working order. If the teachers are to educate the philosophers, it would appear that they should be of higher rank and wisdom than the philosophers themselves, the very pick among the wise men.

Thus as we climb to the top of the educational ladder and survey the whole situation, it is clearly shown that, in this higher realm, teacher and philosopher are merged into one. In the ranking of people for social service, the philosopher is a teacher and stands at the head of his class. Philosophers, by virtue of their preëminence in wisdom, are the natural teachers of mankind, made so by divine appointment. Their classroom is the wide-wide world and the coming ages. The philosopher has sometimes lived in a garret, as did Spinoza; but it is better to instruct the world wisely from a garret than to rule it foolishly or even wisely from a throne.

If we could only begin the experiment with a goodly number of philosopher-teachers, already provided, from nobody knows where!

But we must put up with such as we have. The history of the world has delivered into our hands a number of wise men for our use and profit. The main question is, are we making good use of this accumulated store of wise men? There may be ten times as much wisdom locked up in the lives and works of philosophers as we have yet extracted from them.

One proof that philosophers hold the top rank among teachers is the fact that the recognized masterpieces of literature in education were written by philosophers or by their immediate disciples, under the inspiration of the masters. For example, there are: Plato's *Republic* and *Laws*, Xenophon's *Cyropaedia*, Aristotle's *Politics*, Bacon's *Advancement of Learning* and *Essays*, Comenius' *Didactica Magna*, Locke's *Conduct of the Human Understanding* and *Thoughts Concerning Education*, Milton's *Tractate*, Rousseau's *Social Contract* and *Emile*, Basedow's *Address to the Philanthropists*, Pestalozzi's *Leonard and Gertrude*, Kant's short *Treatise*, Fichte's *Addresses to the German Nation*, Hegel's *Philosophy of History*, Froebel's *Education of Man*, Rosenkranz' *Philosophy of Education*, Herbart's *Science of Education*, Spencer's treatise *Education*, and Dewey's *Democracy and Education*.

In addition to these, the religious reformers, like Luther, Erasmus, Calvin, and Loyola, and literary chiefs, like Montaigne, Voltaire, Lessing, and Matthew Arnold, have produced important works; but the epoch-making books on education have sprung from the systems of thought developed by the great philosophers, and these will remain the prime sources of educational wisdom.

Philosophers have not only thought deeply and written profoundly on education, but they show an unbounded *faith* in education. With them a wise program of liberal education underlies all schemes for individual and social improvement. This unshakable confidence in education as a means of progress is well illustrated by a few statements drawn from Immanuel Kant's short treatise, as follows:

> A complete design of a theory of education is an inspiring ideal, and no matter if it cannot at once be realized. Each generation equipped with knowledge from the one preceding can bring about an education which will develop in due proportion and sequence the natural capacities of men and thus conduct the human race to its proper destiny. Education is an art that must be perfected through many generations. Therefore, it is the greatest problem and the most difficult that can be laid upon human beings. And yet, what glorious results may follow! Education is that source from which everything good in the world springs.

So deeply rooted in the minds of thinkers is this conviction of the value of a wise training that they seldom stop to argue the case. It

is taken for granted, like the air and sunlight. Without such definite forethought and provision for education, the battle for a higher civilization is already lost. There is no future for a world that does not plan wisely for the oncoming children. The more prudent and far-seeing men are, the more comprehensive their philosophy of life, the more they are willing to stake their all on right education. Philosophers have seen this more clearly than others. If they should do nothing more than convince us of the untold worth of this higher wisdom and persuade us to adopt those means of culture best suited to youth, they would be deserving of supreme honors. Philosophy is only another name for the highest wisdom put to the enduring service of mankind. The last verse of the Old Testament is significant: "And he shall turn the heart of the fathers to the children, and the heart of the children to the fathers; lest I come and smite the earth with a curse."

There is one serious complaint against philosophers. They think deeply and sometimes even profoundly, but at times they are abstruse and unintelligible; they do not explain everything clearly. Sometimes they wear seven-league boots and take big strides, to the discomfort of those who try to follow. Philosophy can make no headway with unalert and slothful minds. Of all things, philosophy puts a high premium on sound thinking, on strictly logical and consistent reasoning. Wisdom is dearly bought. Those ambitious to be wise must pay the price, must travel the thorny path of rigid discipline in thinking. They must learn to be severe with themselves, to be self-critical, to acknowledge error and accept reproof. The absolute fool, according to *Proverbs*, is he who despises knowledge and will none of reproof. "A wise man will hear and increase learning, to understand a proverb and the interpretation; the words of the wise and their dark sayings." The conceit of small minds turns away from the dark sayings. The wise man finds in them food for thought.

The wisdom of philosophers, expressed in their organized systems of thought, is a storehouse whose doors are not hastily unlocked. It is not exactly burglar-proof, but only energy and concentration of mind can pry these doors open and make an entrance to the treasure house. This may explain why self-important people, trusting their own shrewdness, neglect this accumulated capital of world wisdom. Such an attitude is, however, but a short road to intellectual suicide. We should not forget that our age may stand on the shoulders of all preceding generations; we can in no wise afford to forfeit this enormous advantage. Least of all in the supreme affairs of education should we neglect the wisest and wittiest of our race.

Philosophy, by virtue of its depth and breadth of thought, is the antidote to shallow thinking. Narrow intelligence, wise in its own conceit, can make little headway toward the solution of our serious problems. Out of the deeper sources of knowledge, out of the experience and matured wisdom of real thinkers, our society is slowly and steadily reshaping its institutions, regardless of the passing breezes of transient and whimsical opinions.

The true philosophers have been in the main a modest and quiet folk, not given to a noisy display of wisdom. In the spirit of Socrates, the more they are inclined toward wisdom, the less pretentious they are and the more they desire to see truth fully vindicated. They are scrupulous and exacting of themselves and of their disciples. Distinguished for intellectual power of a high order, they are lifted by their honest worth and integrity to a still higher level. Their moral dignity and sound character give an added weight to their opinions on statecraft, on human life and destiny, and on religion. Pythagoras, Socrates, Plato, Aristotle, Spinoza, Kant, and Spencer are citizens of this higher world order. They would dignify a grand world court and fulfill Plato's idea of a state under the rule of philosophers.

In the background of all our educational thought and enterprise stand these quiet, deliberate thinkers. They give larger scope and steadiness to our purposive activities. A closer acquaintance with them will convince us that they are quite human and kindly in temper. Besides this, they are practical or pragmatic in their attitude toward life and reality.

Philosophy, of course, takes the broad view. But it is also grounded on original, organized, up-to-date, scientific knowledge. The true philosopher must first settle his accounts with the whole past; he must come to terms with the masters of wisdom who have preceded him. The completest system of philosophy—for example, that of Immanuel Kant—is certain to be subjected to the most searching and merciless criticism from those who follow. The nineteenth century devoted itself to Kant in this critical spirit. In the search for truth the philosopher is no respecter of persons. He would even approach the Almighty with a search warrant and subject him to examination. It is as Job says:

> O that I knew where I might find him, I would order my cause before him and fill my mouth with arguments.

The philosopher goes at his task in this downright and determined spirit. He is bent on finding the root of all wisdom.

Our world is in pressing need of wisdom—of the best it has to offer,

of the utmost stretch and compass of its vision and warning, because of the confusion of the times and the babel of voices.

At the present moment the field of education, like those of social science and theology, is a wrangling ground for a multitude of jarring theories. The world is cleft asunder with sharp dualisms and bold contradictions. The spirit of debate is rampant. In the political world grim war is a threatening monster.

On the other side there has been developing a wiser world spirit that looks toward peace and accommodation and a disposition to yield a basis for compromise. Philosophy may help to steady our nerves, to combine with religion and humanity to break the savage spell and give the preponderance to peace. Philosophers may well join hands with Christian men and women in pouring oil upon these troubled waters. A better spirit than that of horrible and destructive war must be made to prevail in our modern world.

More than a hundred years ago the philosopher, Kant, wrote: "The civil constitution of every state shall be republican, and war shall not be declared except by a plebesite of all the citizens." Durant adds: "When those who do the fighting have the right to decide between war and peace, history will no longer be written in blood. It is time that nations, like men, shall emerge from the wild state of nature and contract to keep the peace."

Philosophy is opposed not only to war, but to all forms of unseemly strife. Even in the forms of debate it cultivates the spirit of moderation and concession. In all debatable questions it is against extreme and prejudiced views. To start with, philosophy notes the natural and inevitable dualisms that cleave the world asunder and recognizes that these may easily generate strife. Philosophy perceives that in all human progress there is much of rivalry between opposing parties and that society advances through struggle and the conflict of opposing forces to higher achievements.

The philosophers, made wise by a full knowledge of these deep sources of perpetual rivalry and conflict among men, would reduce the causes of friction and conflict, would adjust strife—and this by the discovery of a higher harmony that combines opposing views. Philosophy knows how to lift the contending parties to a higher level and unite them on a common ground of truth. Most of the dualisms and antagonisms can be solved by discovering a superior principle of unity. This is the business of philosophy—to get the larger view that quenches the spirit of strife and converts enemies into friends. "Blessed are the peacemakers."

The strong dualisms everywhere evident in life can be overcome by

modest, comprehensive, and well-balanced thinking. Philosophy must come to the rescue with a broad, conciliatory spirit for handling the questions in dispute. Our legislatures and congresses and all kinds of deliberative assemblies are well-known practical means of achieving these results of conciliation and of arbitration. In its important affairs the world has already learned how to put in practice this kind of philosophy. The same thing is being attempted on a broader scale in the world's court. This means that many men are acquiring a philosophic bent of mind. They are learning to combine a penetrating insight with a broad, far-reaching perspective. They are learning to balance up the argument on both sides and to find a middle ground that will satisfy both parties. They are learning to adjudicate.

It is the primary function of philosophy to bring into unity and harmony opposing viewpoints which at first and to many average minds seem positively contradictory. Philosophers are reconcilers on a grand scale. It is their business to cultivate and maintain a mental balance, a spirit of self-control, a far-sighted, clear-headed breadth of view. Compromise, in this liberal sense, involves no surrender of principle. It avoids narrow, hard-headed obstinacy and pugnacity. It means simply a larger view of truth. It means a more considerate treatment of opponents on the ground that they also may possess a large section of the truth.

Narrow minds, lacking a comprehensive view, fall an easy prey to controversy. It is much easier to be a one-sided partisan than to be a judicial-minded thinker. In education, in religion, and in politics there is a vast amount of heated discussion and needless controversy, which embitters more than it harmonizes. To debate important issues with moderation and open-mindedness demands a superior form of wisdom and self-control. There is a prodigious waste of energy due to a lack of breadth and catholicity in thinking. On account of the seriousness of the questions involved, this drift toward controversial extravagance and bitterness is especially noticeable in religious disputes. Two scholarly and noble-minded theologians once fell into a dispute on the nature of Christian love. The controversy grew in intensity till it ended in complete alienation and bitterness of spirit.

Philosophers themselves have not been free from this error—from the common human weakness of running to extremes and of partisan narrowness. But, as a class, philosophers are deep and broad thinkers. It is their business, their very conscience, to cultivate a liberal-minded, judicial fairness. This is their one untiring message to the world. They are peacemakers in a broadly intelligent and humane sense. Their presence, their liberality of mind, and their balanced wisdom

are in perpetual demand wherever men come together for the discussion and settlement of their common, more or less conflicting interests.

Philosophy has brought home to men this one supreme lesson: that progress is the result of strife, of the perpetual conflict between opposing forces. But this strife must be moderated. It must be wisely controlled and directed. The wisdom of philosophers, from Aristotle to Hegel, has pointed out clearly this toilsome, uphill journey toward truth and world betterment, this dialectic between conflicting opinions, leading on to their ultimate reconcilation. Hegel, following Fichte, formulated this law of progress as working itself out in three stages—thesis, antithesis, and synthesis. The proposal of any important idea (thesis) suggests its opposite extreme (anthitheis); the thinking dialectic plays back and forth between these extremes till it finds a common ground (synthesis). This common ground is a higher truth brought to light by the dialectic of discussion. Such is the road to reform and progress.

This is not an easy world to live in. It is full of struggle and conflict. But if people can learn to use their heads and control their impulses, this staging of conflict is the one opportunity for growth and progress. In business, in the law courts, in the market place, in legislative halls the unavoidable strife is on. In the pulpit also, in the daily press, and in the political arena men are at odds, putting up a valiant fight for truth as they individually see it. Even in games and sports the sharp spirit of rivalry is necessary to give them zest and reality. It would be a grand achievement if we could learn to play the game of life as true sportsmen, with self-control and high spirit and with due regard to the rules of the game.

But when, in national affairs, argument runs to extremes, and reason, on the broad basis of judgment and humanity, fails to reach a settlement, a final resort is had to brutal and beastly war. War marks the complete breakdown of religion, of philosophy, and of common sense.

But war is to be outlawed. There is hope that religion and a common-sense philosophy, with the growing and spreading power of education, will usher in a new day—a day in which intelligence and humanity will gain the upper hand and give the deciding vote. In that better day, freed from the waste and ruin of war, the world will have leisure and resources for education and for the works of peace.

The importance of philosophy is seen not only in its direct relation to education, but also in its bearings on the sciences upon which education is grounded—psychology, ethics, and æsthetics. Philosophy is itself a sort of super-science from which these departments of knowl-

edge are derived. Religion, indeed, may be elder born than philosophy, and yet philosophy is supposed to exercise a general sway over all the fields of human knowledge and experience. From this point of view philosophy is a judge and arbiter among the fundamental sciences, and has the overlordship among all those claimants for the highest honors in the ascending order of life.

We are bound, therefore, to inquire what value and function philosophy assigns to each member of this higher council of the sciences, which, like the gods on Mount Olympus, preside over the affairs of men and, in particular, over education. Philosophy is thus the keenest and broadest intelligence brought to bear on our main problems in teaching. In its efforts to appraise the value of these subjects, philosophy reaches the limits of man's utmost power to think and to understand.

Psychology is a subject too deep to be sounded at one cast either by the philosopher or by the educator. And yet they must search its depths and interpret its phenomena. Each of them has a property right in the science of psychology, for it in turn interprets all things, including the knowing mind itself. How this incipient mind in infancy gets a foothold and begins the search for what is knowable, how it proceeds in its inquiries and builds up a knowledge of the world order, is a matter of deep concern to all thinkers, including teachers. Socrates began this quest in a more serious spirit than his predecessors. *Gnothi seauton*—know thyself—was interpreted by him as a command to look in upon his own conscious mind, to make his own thinking and feeling an object of observation and reflection, and to find in this process the root of true knowledge. The philosophers have been at work upon this problem ever since. Several of the master minds were psychologists by special preference. Aristotle, John Locke, Herbart, Spencer, and William James made, from time to time, a critical study of the mental processes.

The modern psychologists have gone far deeper into the sources of mental life. By experimental and testing methods they have probed into abnormal as well as normal mental processes. The study of infants and growing children, to say nothing of animal psychology, has given some deep knowledge of the genesis, changes, and growth in the mental powers. As educators, we are chiefly concerned to know how children acquire knowledge, how they develop and organize their experience into habits, and how they get control of their mental powers so as to use them wisely.

Philosophers have been profoundly concerned in these investigations, and have thrown into this analysis and interpretation of mental

phenomena the full strength of their keen and powerful minds. They have also attempted to trace the growth of individual psychology into social, coöperative thinking and into those institutions that express the products of the common mind in social organization and into those more comprehensive social products expressed by such terms as national spirit, folk spirit, and world spirit. Indeed, philosophers have gone one step further in the effort to determine the development of human thought in the course of world history and to mark the stages in this development. Finally, they have often expressed a belief in an analogy or kinship between the genesis and growth of mind in the individual child and in the whole race. Thus individual development may be writ large in the history of the folk and even of the race. Philosophers, by reason of the broad and universal scope of their inquiries, may be able to throw important light upon these larger meanings and relations of psychology which the psychologists themselves fail to discover or realize. The profoundest thought of philosophers centers upon the human mind. This is the base line, if not the starting point, from which all thought radiates, and this is the center to which all reflective thought returns. This is illustrated by Descartes—*Cogito ergo sum.*

A decisive test of the genuineness of the philosophic mind is its attitude toward *ethics.* The philosophers are downright moralists. The serious spirit in which they deal with ethics reveals a depth and strength of moral energy that brings a shock of surprise, a sort of moral awakening over against our usual easy standards. The higher ethical values shoot up into prominence, and a strengthening of moral fiber is called for. Socrates sets up a stark standard of morality which, without being harsh and Puritanic, still approaches perfection. His notion that he who knows the right will do it carries in it a note of deep sincerity. So far as we can judge, his life conformed to his doctrine. The life and doctrine of Spinoza evidence a high moral purity and consistency which, in the judgment of some, would give him a place among saints as well as philosophers. Ostracized and anathematized by his own people, he kept a pure and gentle and charitable temper. Kant rested his moral conviction upon the transcendental freedom of the human will. When he promulgated his idea of the absolute call to duty, known in ringing phrase as the categorical imperative, he shook the older ethical systems to their foundation. He attributed to the soul a nobility and dignity and a consequent responsibility which has added an element of grandeur to our conception of human nature. It would give to the soul a sort of divine creative power. Herbart set up strong, wholesome moral character as the

supreme aim of education, and, under the lead of this dominant motive, he wrought out a psychology, an ethics, and a pedagogy that in combined operation would lead to the educational development of this sort of moral character. The whole educational procedure was to be organized to this main end.

The standard of ethical conduct promulgated by the master minds in philosophy is positive and unequivocal. Moral values have the priority in individual as well as in social development. The first great masterpiece in philosophical as well as in educational literature, the *Republic*, in which Socrates as teacher is the central figure, is an elaborate discussion of one ethical idea—*justice*. This idea is set up as the foundation for individual character and for social organization in the state.

While theories of thinkers may differ regarding the genesis of moral ideas in the developing mind, the moral foundations have been not only firmly predicated, but put in practice. The educational procedure for planting and cultivating moral ideals has been brought to a clear expression. The demand for family and school and other personal environment directly conducive to moral growth has been made positive. The ethical materials of instruction that will reinforce such a plan of training have been selected and evaluated. The whole organization of the school, the influence and example of companions and of parents and teachers, the direct moral stimulus found in literature and biography, and the immediate control of conduct by will power—all these resources and contributory agencies are to be combined into one deliberate plan and purpose to achieve moral character. The cynical answer to all this is that it is morality on paper. But the moral strength and zeal with which philosophers have thrown themselves into this supreme problem of education is no mere passing gesture. It is worth much to face the issue squarely, to recognize the full composite difficulty of the problem, to gage and organize our moral resources, and to throw the full weight of a liberal and sound intelligence upon the side of morality. This moral bracing up is what our present society requires.

A third subject demands a place as one of the great trilogy of the superior sciences. *Æsthetics* is not easily defined or explained in general terms. Definitions fail to express its meanings, its norms, and its values. But, fortunately, it is capable of positive and manifold demonstration. It can be seen in many high spots as a living and powerful energy. It attracts to itself with a marvel of supreme devotion the climbing geniuses among the races of men. Art also appeals to the common child and man and is no respecter of persons. It can gild the simplest common thing with an unfading splendor. Without

art our world would lose its charm. Our ideals would drop down to the flat level of commonplace. Dullness and ennui would succeed to spirit and animation. Beauty and grace and loveliness would fade out. Music would fall into a jangle. Shakespeare and the poets would dry up and become desertlike. Religion could look forward to no celestial city with walls of jasper. Our museums would become junk-holes, and our temples be converted into stables.

The art impulse is so universal in all periods of history, it breaks forth in so many forms—in the plastic arts, in industrial arts, in music and literature—it is everywhere so charged with idealism that we are compelled to accept it as one of the original, indestructible forces in human nature. How to turn its lifting and vitalizing influence into the ordinary channels of the school studies is a matter of no small import in education. It marks the whole difference between spiritual animation and tiresome dullness in studies.

The spontaneous outburst of the art instinct in all the productive activities of men, in every vigorous and vital expression of human spirit, from the everyday duties of life to the higher forms of religious worship, is not so much an argument for art as it is a manifest demonstration of art as a living, indestructible energy in the world.

It is the function of art to contribute to all the active agencies and to the resultant products of men's efforts a crowning grace of beauty and dignity and grandeur. No substitute for its amenities has been devised or even thought of.

Philosophy is the higher wisdom which would teach us how to appreciate and reverence these three noble sciences—psychology, ethics, and æsthetics—and, a yet superior lesson, how to combine and harmonize them into one grand and engaging spirit of unity, as Bacon said, "for the relief of man's estate."

Religion alone may seem to pass the bounds of philosophy, because it deals with the infinite, which lies beyond the usual limits of human thought. But philosophy, in the form of metaphysics, has sought to penetrate even into this realm. Religion lies within the scope of philosophic thought because it embraces matters of strong human interest. God and eternity, while not comprehensible to the intellectual capacity, do appeal to the imagination, to religious feeling and instincts; they are demanded as the fulfillment of ideals and hopes that are natural and reasonable. Philosophy has approached these exalted themes in a spirit of reverence and in an attitude of simple faith in the divine order of the world. In this respect the wisdom of philosophy shows itself in the humility that stands in awe of infinite goodness and power.

NEEDED RESEARCH IN CLASSROOM SUPERVISION[1]

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This paper will not deal with all supervision; it will treat merely of classroom supervision. There is, besides those supervisory activities aimed at the direct improvement of teaching (classroom supervision), a long list of activities of a different sort, dealing with the general improvement of teaching throughout the whole school system, which are beyond the scope of this paper. Thus restricted supervision may be defined as the teaching of teachers how to teach. And, thus conceived, it may become scientific. As a matter of fact, we may approach it about as we have approached teaching in these last twenty years, studying its objectives, materials, processes, and outcomes statistically and experimentally. It will be the purpose of this paper to indicate the kinds of research especially needed in making supervision more scientific. In order to get some orientation to the field to be discussed, let us consider first two illustrations of the kinds of problems confronting those interested in making classroom supervision more scientific. Many individuals, for example, have become impressed by the possibilities of studying teaching experimentally. By such means these experimenters will come eventually to new facts, laws, generalized statements, and principles of teaching. Teachers and supervisors must then come to make use of these facts in the improvement of teachings. But who knows whether such information is correctly applied? Principles of teaching, for example, may be quite scientifically derived, but personally and subjectively applied. The problem is one of considerable importance to those interested in the scientific study of supervision.

Another practice of recent development, illustrative of the problems confronting those interested in the development of more exact methods in classroom supervision, is the proper use of objective data-gathering devices. A supervisor may, if he is inclined to do so, collect a considerable amount of objective evidence about the teaching performance of the teachers supervised by him. He may, if he chooses to do so, count the number of thought and fact questions, the number of

[1]A paper read before Section Q of the American Association for the Advancement of Science, Nashville, Tenn., December 27, 1927.

illustrations of different types introduced by the teacher, the number of volunteer comments made by members of the class, etc. These data may be made highly objective, and yet the supervisor may be quite unscientific—that is, one supervisor may look at the data and say that the teacher demonstrates extraordinary ability, and another may look at it and say that the teacher clearly possesses little or no ability at all. Here you have, as in the first illustration, objective data personally applied. The problem is an exceedingly interesting one. Following is a statement of some of the most important issues confronting research workers in this field:

(1) *Need for exact information about the thing to be improved.* Obviously, we must know what is to be improved before we can improve it. Tentatively, these are the knowledges, skills, attitudes, and ideals which teachers need to possess in order that they may expeditiously realize the objectives of education. This problem seems to be one of careful job analysis, projected not so much, however, upon a background of *general* practice, as has been done by Professor Charters, as upon a background of *selected* practice. The problem might be approached by first locating a great variety of teachers in different grades and subjects whose classroom organization and teaching procedures are known to be effective. We might then proceed to determine by a process of job analysis the knowledges, skills, attitudes, and ideals possessed by these teachers. Some such outline as the following will serve to indicate the kinds of information needed:

The teaching activity to be improved:

a. Knowledges:
   - (1) Knowledge of the objectives of education
   - (2) Knowledge of subject matter
   - (3) Knowledge of pupils
   - (4) Knowledge of how pupils learn
   - (5) Knowledge of standard of work expected of pupils

b. Skills:
   - (1) Skill in teaching—
     - (a) In making the assignment
     - (b) In motivating work
     - (c) In providing for individual differences
     - (d) In directing study
     - (e) In directing discussion
     - (f) In measuring results

(2) Skill in management—
  (a) Attention to physical conditions
  (b) Economy of time in the handling of materials
  (c) Discipline
  (d) Social relations with and among pupils

c. Attitudes and ideals about—
  (a) The quality of teaching
  (b) The quality of work
  (c) The objectives of life
  (d) Human relationships, etc.

(2) *Need of more information about the probable effectiveness of different training programs.* Supervisors at present serve their own convenience in setting up training programs. Little is known about the probable ultimate effect of like units of effort expended in any one of many different directions. Supervision has been too much of a trial-and-error process. More specifically the problem is this: Given a fairly attractive young girl with eighty per cent mastery of the subject matter taught, seventy-five per cent efficiency in teaching technique, fair discipline, and an I.Q. of 120, where should the supervisor begin? That is, what will be the probable returns in teaching efficiency if the teacher and the supervisor concentrate first upon the mastery of the subject matter taught, or upon teaching techniques, or upon discipline? No one seems to know. Whether this matter can be determined through the analytical use of the multiple regression equation, or whether it must be solved experimentally, is a statistical problem of some importance.

(3) *Need for more information about the validity, objectivity, and reliability of the items of teaching observed by supervisors.* One supervisor counts the number of questions of different sorts asked by the teacher, another notes the relative amounts of teacher and pupil participation as measured by the time consumed by each, and another records the percentage of pupil attention. Each has his own system. Unfortunately, little is known about the validity of the measures (items) imposed. Some have an important bearing upon teaching and some have not. Supervisors have not ordinarily been challenged upon this point. They have been allowed to follow the dictates of their own desires in choosing which items they will observe, the selections being a matter of personal taste. Likewise, little is known about the variability of teaching performance, and consequently about the reliability of supervisory visits of different numbers and lengths. No one seems to know how long and how many times supervisors need to visit teachers in order to get reliable data about them. As we get

more information about the variables and constants of teaching performance, we will probably know more about the efficiency of single, double, and triple visits for different items and teachers.

Finally, many of the items to observe chosen by supervisors are highly subjective. This point is one of importance. "The spirit of coöperation," the "atmosphere of the classroom," and "happy relationships," important as they are, can hardly be said to be directly observable. In any case, independent observers set to observing the same teacher show little agreement in their estimates of such matters. Sufficient research has already been performed to raise grave questions about the validity of some frequently observed items of teaching, to indicate that the coefficient of agreement of two independent observers varies tremendously, and to show that teachers are many times more variable in certain activities than in others.

Related to this problem is the need for validating all means of collecting data about teachers and teaching. The demand for objective supervision has brought a new crop of analyzing devices—such as attention charts, time charts, activities check lists, etc.—all of unknown validity, objectivity, and reliability. These need to be scientifically evaluated.

(4) *Need of experimentally determined principles of teaching.* While supervisors are primarily interested in the changes produced in pupils—that is, in the results—they must necessarily also be interested in the processes of teaching, since it is only through the improvement of these processes that the product may be improved. A serial—one, two, three order—statement of the characteristics of good teaching is needed.[2] These statements will usually take the form of laws, generalized statements, explanations, or principles of teaching. They may be determined through the experimental study of teaching, through the consensus of experts about what constitutes good teaching, or through the analysis of the teaching performance of good and poor teachers. While much has already been done in the experimental study of learning, little has been done in the experimental study of teachnig. The work in the two fields needs to be closely related and redirected in accordance with its ultimate use. The research in both fields aims to bring about improved teaching (and ultimately improved learning)—the first, by furnishing the teacher with more information about the learning process; the second, by furnishing the teacher with more information about the teaching process. While the two fields are not the same, they represent different aspects of the same problem.

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[2]Barr and others, *Elementary School Standards for the Improvement of Teaching*, Edwards Bros., Ann Arbor, Mich.

There is need, then, for a careful statement of the characteristics of good teaching based upon the experimental study of both learning and teaching.

Once these laws, generalized statements, explanations, and principles of teaching have been determined, they must be translated into observable items of teaching. Supervisors need to know not only the principles of teaching, but the observable signs of the application of these principles. The supervisor's next question is always, "What does a teacher do when she applies principle X?" Otherwise, principles of great validity may fail to function in practice because of the subjective form of their statement. Preliminary researches in this field seem to indicate that teachers differ not qualitatively—that is, in the activities performed by them—but quantitatively—that is, in the frequency or time consumed in these activities. The implication of this statement is that the experimentalist must give more consideration to the condition of application, stating in qualitative and quantitative terms the materials, conditions, and specific teacher and pupil activities which constitute the observable data upon which his generalizations were originally based.

(5) *Need for more information about the improvability of teachers.* Little is known today about how teachers learn to teach; which activities are first and which are last mastered (if at all mastered); the mental and physical difficulties to be overcome; the kinds, amounts, and rates of learning; individual differences and allied problems. While detailed case studies of the teaching of beginning teachers have been initiated, the preliminary reports will probably yield little more than concrete suggestions about improved techniques for further research in this field.

(6) *Need for more information about the relative effectiveness of various improvement (supervisory) devices.* The supervisor may talk to the teacher, write to her, direct her to sources of information, demonstrate procedures, provide means of self-analysis, self-criticism, and self-improvement, or utilize experimental techniques. Little is known about the relative value of these procedures. Probably it is not so much a matter of which shall be used as of when they shall be used. None of these means will probably come to be used exclusively. More information is needed, however, about when these devices are to be used, how they are to be used, and with what efficiency they should be used. Research in this field should be by no means limited to comparative studies of devices, but should rise to the level of experimentally determined principles and theories of classroom supervision.

There is in this connection considerable danger that supervisory research may lose itself in mere details. The writer has probably spent as much time as any one in the whole country in the counting of things done by pupils and teachers. It was his original thought that we could dispense with all theory and principles and build the new supervision upon the specific observable activities performed by teachers and pupils. Such a system would at least have the merit of being objective. But he now sees that it would have no principles. Some well-known systems of curriculum research are open to a like criticism. Through long processes of job and social analysis much detail has been collected. While the collection of this detail serves a valuable purpose, such research falls short of what is expected of it, in that it does not supply principles and objectives. Probably these detailed lists of abilities, knowledges, skills, and attitudes are merely the data for larger inductive investigations, leading eventually through processes of analysis and classification to generalizations. The point is not that we do not need the detail, nor that we do not need the generalizations, but that we need both. This is not merely a statement of compromise. A system of supervision built around principles alone will have no objectivity; a system built around details alone may have no validity. The new supervision must be built around both.

(7) *Need for more exact measures of teaching ability.* These measures are of two sorts: (a) direct—that is, through the direct application of tests and scales to the teacher; and (b) indirect—that is, through the measurement of changes produced in pupils. Both kinds of measures are needed. The latter, when properly safeguarded, particularly as measured by changes in the rate of growth as proposed by Courtis, especially when the tests are of the diagnostic type, will not only measure the teacher's gross success, but inventory her successes and failures. Such tests, however, merely describe the product. They tell little about the processes of teaching by which different products are derived. It is in this field that direct measures of teaching ability should have wide applicability. It should also be pointed out in this connection that the future of scientific supervision is very closely tied to the development of precise instruments of measurement. Supervisors now know little about the results produced by them in their supervision. It is only when results are known that processes may be improved. Otherwise, activities may become an end in themselves, disassociated from either objectives or outcomes. There may be plenty of activity, but to no visible end.

In closing, may it again be pointed out that this paper has not dealt

with the whole of supervision, but merely with a part of it. This part has been selected because it offers immediate prospects of scientific treatment. If supervision is defined as the teaching of teachers how to teach, it may become definite, objective, and scientific. It is something different from the general improvement of teachers in service.

THE ENGLISH TEACHER AND HIS READING

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One of the greatest problems, if not the greatest, of the present-day college teacher of English is the choosing of attractive, nourishing, and profitable reading material. He comes, let us say, to his teaching at the age of twenty-two or twenty-three, with a bachelor's or even a master's degree. His doctorate study lies before him. He may even have chosen his field for graduate study, and he wishes at the same time to keep himself reliably and intelligently informed concerning contemporary literature. Hence his problem. For he finds before him a cosmic flood of printed material. "Of making many books there is no end," are the oft-quoted words of the Preacher, and he wrote with the far-sighted acumen of a genuine prophet.

In the year 1925 there was published in America a total of 9,574 books, an increase of 562 over the preceding year. There were 6,880 new books and 1,493 new editions; the others were pamphlets. Of the books published for the first time, fiction contributed 898 new titles; poetry and drama, 519. Other figures included: religion and theology, 885; science, 670; biography and memoirs, 561; history, 459; geography and travel, 438; general literature, 419; philosophy, 276; philology, 260; education, 248; fine arts, 175.[1]

Much of this printed material, fortunately, is worthless for the teacher of English; but some of it is not, for it includes the productions of the best contemporary writers, native and foreign, in various fields. And these "best writers" have formed the habit of giving birth to at least one new brain child annually. Hilaire Belloc, we are told by one reviewer, "is always good for at least three books per calendar year."

So making a list of annual contemporary books to be read would not be difficult, but bringing the number of books on this list within readable limits is another matter. There are easily twenty-five first-rate English novelists and twenty-five first-rate American novelists, each producing on the average one new book a year, who deserve reading. In both England and America there are published annually a dozen deservedly readable volumes of poetry, a dozen books of essays,

[1]Statistics from *International Book Review*, March, 1926.

a dozen volumes of short stories, a half dozen dramas, a half dozen biographies, two or three histories, two or three collections of letters, a half dozen books on travel, philosophy, and fine arts. Add some ten or twelve books of criticism and public affairs, two or three prize novels, say a dozen of the best books from various foreign countries, and what have we? An annual list of about two hundred books—four a week! But these are not all. There are the magazines. It is not difficult to name a dozen worth-while monthly periodicals and one or two weeklies (reviews and news digests). In addition, there are, of a fairly large number, a half dozen philological publications (monthly or quarterly) that should be read.

Now, all this reading would be very pleasant if a teacher were financially independent and had a great deal of leisure time; but neither is true, and so the list must be cut down. Experimentally, let us say that in some unaccountable manner this list has been reduced to twenty-four, two books a month—a dozen novels, one or two volumes of poems, one or two books of essays, and the remainder selected from the classes mentioned.

The problem, then, becomes one of choosing. The teacher turns to the book reviews and to the advertisers' announcements quoting critical opinions. But what does he find? That every common book is praised in terms of superlatives, that every book beyond the common is praised in a series of superlatives. Often a comparison is made to some time-honored masterpiece, and one may be sure that the recent production does not suffer in the process. Few books are condemned. It seems to be the purpose of reviewers at present to review only those books which can be spoken of in elaborate and glowing terms. May I illustrate by giving the comments about three of the well-advertised books of the past year?

Of Theodore Dreiser's *An American Tragedy:*

"It is the greatest American novel of our generation."

"I am an old cautious critic, not given to rash use of superlatives. So I mean much when I say that *An American Tragedy* is the Mount Everest of American fiction, and it is one of the high hills in all the fiction of the world."

"The most important American now writing. More than that, the most important man writing English."

"Theodore Dreiser has given one of the world's greatest novels."

"An American epic comparable in power and understanding to *Jude the Obscure* or *The Brothers Karamazov*. . . . Dreiser's greatest novel, and an impressive achievement to be reckoned with in any history of American literature."

Of Margaret Kennedy's *The Constant Nymph:*

"The year has certainly not yet produced a novel up to *The Constant Nymph* in all-round excellence."

"One of the best novels, old or new, that has ever absorbed the reader's attention."

"*The Constant Nympth* is the best book I've read in—ten years."

Of Ford Madox Ford's *No More Parades:*

"No one who cares for the art of fiction can fail to relish its brilliance."

"A great novel-epic of the war."

"Could be compassed only by the pen of a genius."

"This book will live."

"The most highly praised novel of the year."

"The great book of the season. One of the greatest pieces of fiction of its time."

"The most distinguished novel of the period."

"Far and away the finest novel of the year."

"One of the great works of art."

"As great as anything produced in English during the past twenty-five years, and certainly more brilliant than any other novel of the same period."

To these some additional illustrations of comment on individual authors and books should be added:

Sylvia Thompson's *The Hounds of Spring:* "The first significant piece of work of the post-war generation."

Melvin P. Levy's *Matrix:* "This book belongs in the front rank of American literature."

Geoffrey Scott's *The Portrait of Zelide:* "The best fictional biography that has been published in English." It has "enriched English literature with a book of marked distinction, a work of art."

Llewelyn Powys' *Skin for Skin:* "It has only one companion volume, De Quincey's *Confessions of an Opium Eater.*"

Wilbur Daniel Steel's *Taboo:* "Profound and vital, . . . a shining golden needle in the haystack of contemporary fiction."

Count Hermann Keyserling's *The Travel Diary of a Philosopher:* "The most remarkable book to appear in English this year."

M. R. Werner's *Brigham Young:* "No more brilliant biography has appeared on this side of the Atlantic in our generation."

"Martha Ostenso takes her place with the half dozen story tellers who really count in America . . . *Wild Geese* is more than a story—it is the fulfilment of the rich, glorious promise of our native writing."

"Mr. L. H. Myers stepped at once into the first rank of contemporary novelists a year or two ago with *The Orissers.*"

Mary Glenn "is one of the notable writers of this generation."

W. E. Woodward is "certainly the best of contemporary reconteurs."

T. S. Stribling's *Teeftallow* (bear in mind the elaborate eulogies of Dreiser, quoted above, and those of Sinclair Lewis, six years ago): "*Teeftallow* is devastating. It is a book for the tough-minded. Stribling's calm irony makes Dreiser seem an optimist and Gopher Prairie look like Paradise. It is really a masterly performance, written with a pen dipped in vitriol. Stribling is one of the scant half dozen wholly competent and distinguished novelists of the United States."

How refreshing it is to find, among these swarms of eulogia, a fragment like the following, concerning Park and Burgess' *The City:*

"There is nothing in this sociological study of urban life that is not already known to every person not an idiot. The authors spend pages and pages in pointing out that cities are divided into blocks, that they usually have mayors, that they often have newspapers, etc."

Yet this criticism is of the very same type as that given in the preceding quotations, except that it is negative. One feels that William McFee is right in regard to the present-day reviewers:

"To be quoted, you must use strong language. You must do handsprings and bellow through the megaphone at the same time. In the course of a single week recently I learned from reviews that John Galsworthy is the worst short-story writer who ever lived; that most of Conrad, Stevenson, and Walter Pater is sheer bad writing; that Jack London has come back from hell and has written a new novel under another man's name; that Molière is an overrated bore, and Congreve so insignificant that a single story by Ring Lardner overwhelms all he ever wrote. . . . Not one of those statements is believed by the person who made it. They are simply frantic bids for the attentions of a milling mob of people who care very little for literature, anyway; who amuse themselves with radio, motoring, golf, bridge, phonographs, vaudeville, newspapers, and movies; and to whom books are furniture."[2]

Nor are modern reviewers the sole transgressors in this sin of superlativity. Dr. Johnson, for one example, in one of his oracular moods, declared of Latin poetry in England: "If we produced anything worthy of notice before the *Elegies* of Milton, it was perhaps [William] Alabaster's *Roxana* [published 1592]." But the superlatives of critics past and gone mean little, for time has mysteriously but quite inflexibly determined the rank and position of any book with claims to immortality.

And this is exactly what ought to be done for present-day books, on a small scale, as far as the English teacher is concerned. Three methods may be suggested.

First, if he has the time, the English teacher may read a dozen or two dozen books a year. Choosing titles for his list will be his most difficult task. As for magazines, he must scan the table of contents carefully and choose, from the score or more so-called "standard" magazines, each month the six or eight articles really deserving reading. The same method he may apply to the professional magazines.

Second, he may wait for the merits of contemporary books to establish their claims. If a book can maintain its reputation for ten years,

[2] *Harper's Monthly Magazine*, March, 1926.

surely it can offer returns to the one who reads it. For example, what of the books of 1917 or thereabouts? Not many titles can be mentioned offhand, but those which can deserve some claim to attention. As for the other thousands of books in the various fields published that year, unless their purpose be one of historical importance or research, they are as valueless and without nutrition now as are the elaborately superlative comments which sought to raise them from the nadir of nothingness to the zenith of immortality. There is, indeed, no reason why one should try to read every novel or every book by a present-day author, even though he ranks high among his contemporaries. Very few, except literary research scholars, read the entire output of the more voluminous, older novelists—Dickens, Thackeray, Wilkie Collins, Bulwer-Lytton; and surely no one can seriously claim that Wells, Bennett, Sinclair, Wharton, Tarkington, Glasgow, and the others are of greater importance. That is why, I think, ten years would be an adequate time to determine which books may have contemporary merit.

Third, the English teacher may refuse to read any books published after 1900—except those, of course, in his own immediate field. I am inclined to believe that this is the best method. Among its drawbacks, it bestows the name of pedant; and, as Professor Phelps says: "If a pedant should say today, 'I don't read fiction,' he would mean that he was not interested in contemporary thought, for much of the deepest and most original thought of our time appears in fiction." The best answer is the time-worn but time-proven expression: "Art is long, and life is short." For the teacher of English has before him—to be studied, mastered, and digested—twenty centuries of written materials, not only in poetry, drama, fiction, criticism, and the essay, but in allied fields as well—biography, history, philosophy, theology, medicine (for example, Burton's *Anatomy of Melancholy*), and the like. The whole English field is his, with its Greek, Roman, and Celtic backgrounds, as well as the best in foreign literatures.

These are the books that should claim his reading time, for these furnish the subject matter which he teaches; these furnish his means of livelihood; these furnish—if his vocation is also his avocation—the materials which make for the spiritual enrichment of his life.

The young teacher of English has before him also his doctorate work—not as a profitable economic investment, but as a professional necessity. To receive his doctor's degree he must have a rather thorough general knowledge of the whole field of English literature from its dim, misty beginnings down to the dawn of the twentieth century. In addition, he must be a specialist in some definite time period or in

some literary genre. For example, the student specializing in Elizabethan drama must have studied—not read; there's a vast difference—some 1,100 plays (two studied each day would mean enough reading for nearly two years), as well as almost innumerable volumes of other contemporary Elizabethan literature and contemporary and subsequent criticism and comment. Then when he receives his doctor of philosophy degree, he is ready to *begin* doing serious work in research and scholarship.

This study of literature, this specialized reading, is, moreover, a kind of "side line" for the young English teacher. His means of livelihood is the teaching of composition, varying from three to five classes per week. He can have little hope of advancing very high—either professionally or financially—by being just a good composition teacher. There is no opportunity—indeed, no need—for graduate study in this field, and so most of our graduate universities offer few courses in advanced composition; few, if any, grant doctorate degrees in this subject. Departments of rhetoric are not often found. Usually there are departments of English, which emphasize English and American literature courses and which give to graduate assistants and inexperienced English teachers the "drudgery" of doing the composition work. It is little wonder that these young teachers look upon their composition teaching as a period of apprenticeship and make every effort to advance to be teachers of literature. Probably this attitude will not change until some method is devised whereby composition teachers can advance—again, financially and professionally—on their merits as teachers of composition. Perhaps this time will never come, for instruction in methods is usually dry and unstimulating, while literature, according to its broadest definition, is *life*.

Thus at present, while the young English teacher is earning his living doing one kind of work—composition, he is specializing in and preparing to teach another—literature. This is one reason—and a very important one, too—why time, to him, is so inexpressibly valuable. As he becomes immersed in his graduate work, he becomes fascinated by its demands. It offers him the opportunity for research, for scholarship; it invites him to the quest for truth, for the discovery of new facts, for the reinterpretation of old truths in the light of changing perspectives, in the light of the broader knowledge which research in history and economics and language is casting upon the same period and subject.

And in this quest for truth—again remembering that "life is short, and art is long"—he feels that much of the time spent in reading present-day books is time wasted; that they are written, for the most

part, in haste, to be read in haste and thrown aside; that the modern books and magazines which he needs to read are those which deal with subjects and purposes similar to his own. If time allows, he may read some modern books, choosing the second method mentioned above. If time does not allow, then he must bear the stigma of the multitude—unimportant, after all—of "pedant." And in consolation for his refusing to be swept along with the ever-increasing flood of contemporary publication, he can still remember the famous words of the famous Preacher, especially the oft-ignored but sympathetic and important conclusion: "Of making many books there is no end; *and much study* [i. e., reading—from our point of view, present-day books] *is a weariness of the flesh.*"

CURRICULUM CONSTRUCTION[1]

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It is the purpose of this discussion to approach this subject through a brief résumé of the methods of curriculum construction, which are the methods of curriculum study and of curriculum revision. This will be followed by a brief citation of what are commonly accepted as some of the "outstanding" contributions of these several methods, which in turn will be followed by a suggested list of needed researches. Throughout the discussion there is an attempt to hold to the viewpoint of the administrator and to consider his needs from the standpoint of the curriculum.

When the subject of curriculum revision is approached, there comes first the consideration of the kinds of curriculum construction current. Each has its own devotees, each its own merits, loudly and insistently proclaimed by these same devotees, and each its own shortcomings. Each contributes something fundamental, when viewed dispassionately and in a somewhat detached way. It is well to begin a discussion of this subject by a consideration of these various methods of study.

METHODS OF STUDYING CURRICULA

Philosophical Study of Curricula

The first to claim attention has a time-honored place. It is the philosophy of education. Forced into retirement for a brief period of time by the prominence in educational study of quantitative methods, it has, nevertheless, persisted as a method of attack in problems relating to the curriculum. Where it succeeds in being the basis of study, there will be heard a great deal about "aims," ultimate and specific. Students, some profound and some less so, will reason at great length on the "aims of education," its "cardinal principles," and the whys and wherefores of all education. "Initiative," "freedom from restraint," and "purposeful activities" will plentifully adorn its discussions. Some of this study, even much perhaps, will be "hunting reasons to keep on believing what is already believed." Oftentimes so much time may be spent in these more theoretical phases of

[1] A paper read before the Education Section of the American Association for the Advancement of Science, Nashville, Tenn., December 28, 1927.

the work that not a great deal of time will be left for actually building or revising a curriculum. One thing that is almost sure to come out of such work, however, is a series of "principles" governing curriculum construction. There is no part of procedure, in this type of study, so dear to the student as the formulation of these rules. Often derived in a strictly *a priori* manner, they are soon viewed as are axioms in algebra. Nothing, it seems, can be done until they have been made ready. They constitute, however, one of the most valuable products of this type of study. Though harshly arraigned and bitterly impugned, even by some of this same group of students, they nevertheless offer a tangible tool for the one who probably will make the curriculum. To the extent that they are sound, they guide the thinking and, in part, the actions of this group of curriculum reformers and of those they touch. Summed up, this method is an excellent one for the school of education or graduate teachers college, but one which must find much of its value in practical situations through some of its products and by-products rather than through its literal employment in a practical school situation.

Job Analysis

Job analysis, borrowed from the industrial world, with its value greatly enhanced by war work, and with the inevitable appeal carried by analysis, next claims attention. Its three columns form beautiful charts, and in the relating of these columns to each other lies much that is close to the heart of all such study. "Column One"—*What* things the curriculum must do, its unit tasks, the things it trains for; "Column Two"—The kinds of knowledge and the types of skills required to do these things most effectively; "Column Three"—The phases of subject matter which, when taught, will furnish the kinds of knowledge, and the habits which, when formed, will develop these skills. The logic of this method is well-nigh irrefutable. But it leads to almost endless investigation or, worse still, to questionnaires. A wonderful method it is to employ the means at the disposal of a foundation, but one hardly practicable from the standpoint of a school system; its chief claim seems to lie in its success in pointing out the value of the simple relations and its ability to apply tangibly the philosopher's emphases on *purpose*. Especially valuable will be any of the relations it really discovers.

Committee-Conference Curriculum Making

The committee-conference curriculum, which means calling in every one concerned to participate in the making of the curriculum,

provides opportunity for developing more interest of an active sort, and more zeal on the part of all concerned, except perhaps the children for whom it is intended, than any other method. It brings in, if carried to the extent advocated by its most devoted disciples, even the neighborhood; only the children do not actively participate in the making process, being only consultants. It has those features of salesmanship resulting from wide participation. It is every one's curriculum, as all had a hand in its making. How much the workmanship has suffered by amateur aid it would be hard to say. It has many positive appeals. It is about as far from that centralism usually associated with technical performance as one can get, and for that reason alone will have some popularity. The committee-conference in many lines of endeavor is the popular way of getting away from the seeming autocracy of technical skill. Perhaps to the extent it is not what one assumes that it is, it is good. For the administrator its chief objection is that it requires a very great amount of time, with consummate diplomacy, to produce a curriculum.

Quantitative-Study Curriculum Making

The quantitative method of curriculum study came into popularity because it seemingly reduced such a study to a scientific basis. In the eagerness to apply it, the units counted were those which measured practice, and the devices used to clarify the meanings of those units often reduced the standard sought to the dead level of an average. Later, to avoid this, *selected practice* was studied, with the error lessened in result, but with the reasoning still open to question. This method has offered a systematic way of studying what other people are doing. Perhaps this has been its chief recommendation to the administrator. He is accustomed to studying in a very limited and equally haphazard way what other school systems are doing, and turns quickly to this as a systematic way of making a curriculum. To him the chief value of the method lies in the fact that he is accustomed to it, and in the additional one that it can be used in a limited time and by one individual. Its dangers are that he will expect more from his devices than they are capable of giving, or that, lost in the details of his method, he will lose *balance*.

Experimental Study

Last on the list is the experimental project in curriculum. Offering the greatest promise of any of the five plans here discussed, it is the one which is reserved most strictly for the experimental school—a term which has always meant, and probably ever will mean, a pri-

vately supported and privately controlled school. Public education will not experiment. It has to believe, at least, that it is itself one great experiment, with a finished product. The public-school administrator is not enthusiastic about the experimental method of curriculum making. Expense, controls, uncertainty, and the critical attitude—all its chief merits—fail to recommend it to the administrator who is impatient to see a finished product. From it, however, he can—and let us hope that he will—take the results which are *proved* and *checked*. From its methods of studying curriculum problems he can perhaps borrow little. His seeming success in his administrative position may be seriously interfered with if he borrows too much of the critical attitude of the experimenter.

CONTRIBUTIONS MADE BY THE VARIOUS METHODS

Philosophical Study

The contributions are approached in the same order in which the methods have been viewed. The first to be considered is the philosophical one. Only two contributions will be presented. Many others could be named, but these two are chosen because of the influence they are believed to have exerted on curricular development in recent years. The first selected is the "suggested curricula," in which the Carnegie directed study of the professional preparation of American teachers culminated. This study, commonly known as the Missouri Survey of Teacher-Training, had as its suggestive feature a series of curricula for normal schools and teachers colleges, which have been more freely written into the curricula developments of these institutions, it is believed, than has the results of any other study in any phase of education in recent years. It seems not extreme to speak of this point as the beginning of a serious effort at curriculum development and adjustment in these schools. The second contribution of this type is looked upon very much as a corollary of the first. It presents one additional feature—the series of principles referred to in the beginning of the discussion—in very plainly marked form. No attempt is made in this discussion to evaluate these principles as presented. Their influence as a starting point in similar studies has led to their inclusion and to the consideration of the study as a fundamental contribution. That phase of the "Louisiana Survey" which dealt with the curricula of institutions of higher learning is named as a corollary to the Missouri study.

A Contribution by Job Analysis

The job-analysis method of attacking curriculum research has made many specific contributions. Because these were specific they are thought of as minor contributions, and only one of a pretentious character, in that it will have general effects, is here mentioned. Certainly the effort of Professor W. W. Charters, of the University of Chicago, to analyze the work of the elementary teacher, as he has previously analyzed the tasks which constitute the work of secretaries, deserves first consideration. As yet, little can be said as to its findings, and less as to its effects. It is here named, however, as an effort, now in progress, to analyze on a general scale a basic task in teaching.

A Contribution by the Committee-Conference Method

The committee-conference method probably found its best-known contribution in the Los Angeles Curriculum Study made under the direction of Professor Franklin Bobbitt. This is too well known to students of the curriculum to need detailed discussion. It seems destined to find its place as another of those contributions, made at the right time and in the right manner, which is destined to exercise many and far-reaching effects on this field of research. Perhaps in this same connection should be mentioned such studies as the one now in progress in the Oklahoma City system, under the direction of Professor Bruner, of Teachers College, Columbia University. There are many curricula constructed by this method which are developing in widely separated sections and under various kinds of direction.

The Quantitative Method

The quantitative method of curriculum study, it is believed, has left one of its most helpful contributions in the study of Stratemeyer and Bruner, "Rating Elementary School Courses of Study," published by the Bureau of Publications of Teachers College, Columbia University. As its name indicates, it attempts to develop criteria for judging practice which will refine the study of such practice and make its quantitative measurement more definite in interpretation. This study admirably illustrates the checking value of this method of curriculum study.

Contributions by the Experimental Method

The experimental method has already been spoken of as holding perhaps the greatest promise of any of the methods of curriculum construction. Three experiments, believed to be of national importance and of fundamental significance, are here named. Brevity for-

bids more than mere mention of each. The project in curriculum development of the Lincoln School of Teachers College, Columbia University, is named first; the curriculum of the Francis Parker School, of Chicago, with its long period of try-outs, is mentioned second; and the project of Charles A. McMurry in large unit organization, which has been carried on in the Demonstration School of George Peabody College for Teachers during the past ten years, is named third. These experiments, each with its individual slant and each well known to students of curricula, illustrate contributions made by this particular method of study.

These contributions have been named as fundamental and outstanding. At the same time, others of proved merit are exercising definite influences or offering definite promise; these also deserve recognition. Such studies as the Missouri High-School study, various junior college curricula studies, F. J. Kelly's study of the American Arts College (fundamental certainly in its consideration of "sequence," "concentration," and other specific features of curriculum administration), and many others, can be excluded here only because time and space prevent their consideration. Some doubtless deserve the classification "outstanding" as well as do the three chosen.

WHAT RESEARCH IN CURRICULUM STUDY IS NEEDED

The final division of this study deals with needed researches; it attempts to discuss them under the several heads used in the preceding parts of this paper. There is a very great need for careful research which has as its purpose the establishment of a series of principles governing curricular purposes and the creation and administration of curricula. When one reads Spencer's "What Knowledge is of Most Worth," and then reads the "Cardinal Principles of Secondary Education" evolved more than a half century later, the striking similarity of thought and expression is apt to create the belief that not a great deal has been added or subtracted by the method which produced both. A research which would set out to create, check, and establish a list of principles guiding curriculum construction is very much to be desired.

There are so many specific researches needed in job analysis and as bases for its successful employment that only a few can be mentioned. There is a great need for researches in the psychology of subject matter which will make clear what skills and what phases of knowledge present divisions of subject matter will produce. There is an equally great need for carefully made researches which will

determine the unit tasks to be performed in each of the tasks for which public education strives to train.

There is needed research in regard to the committee-conference method of curriculum study to determine to what extent different studies of this type result in a standardized product, or perhaps to measure the extent of variation produced by different studies aiming to accomplish the same purpose for what are practically the same situations. Perhaps this same study should attempt to discover the real dominating agency in such a process.

Every curriculum evolved by the philosophical method, every one derived by job analysis, every one which has come from quantitative study, and every hypothesis which a committee-conference proposes should be tried out through a carefully controlled experiment before being offered for widespread use to public education. Perhaps the greatest need of current experimentation is greater refinement of controls and of measure of achievement, together with greater development of quantitative methods and a wider application of these as a means of interpreting the results of this experimentation.

There is another, a composite, field for research which is inhabited by an administrator whenever a curriculum problem is approached. Research is needed which will answer such questions as: What type of attack is best suited to a specific curriculum problem? What parts of each of the various methods can be most effectively used in a *synthetic* method of curriculum study perhaps developed from all the ones that have been used? How can the results of such studies be checked other than by the post-mortem route?

This brief presentation has but mentioned studies, where it may seem desirable to consider the detail of such studies. It has resorted to arbitrary classification and to personal judgment, where other methods are more desirable. It has, itself, in fact, illustrated a very common weakness of research in attempting many times as large a task as could reasonably be included in one discussion. In attacking the problem, however, it has perhaps pointed out the main lines of study already pursued on the curriculum and has indicated the need of much painstaking research.

ENGLISH OBJECTIVES AND CONSTANTS IN SECONDARY SCHOOLS

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OBJECTIVES

The formulation of objectives is receiving much attention at the present time. This is a desirable line of emphasis, since the work of the school can be made meaningful only in so far as it aims toward definite and specific goals of instruction.

Probably the most comprehensive investigation of objectives in the field of English has been made by Pendleton.[1] In the course of the study 1,581 social objectives of English instruction were collected from seven sources of information. Eighty competent teachers of English catalogued the objectives according to their comparative importance. The eleven objectives relating to reading which were considered most important are as follows:

The habit of reading for enjoyment literature of the better sort.

A taste for reading books (not merely magazines) of an excellent sort.

An attitude of alert interest in the world and all things in it, and a desire to increase one's knowledge.

A perennial, never-failing interest in people; the habit of studying them sympathetically.

The ability to refrain from marking or marring in any way a borrowed book.

Habitual realization that good physical and mental health is fundamental to really profitable reading.

A taste for reading the better class of magazines, not the inferior fiction sort.

The ability to rest oneself and divert one's mind from business or social perplexities through the enjoyable reading of literature.

The ability to determine quickly and accurately from a dictionary the pronunciation of a word.

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[1]Charles S. Pendleton, *The Social Objectives of School English*. Nashville, Tenn.: George Peabody College for Teachers, 1924.

An attitude of never injuring in any way library books which one is consulting.

A genuine, deep-seated interest in the world of books.

Bobbitt[2] reports an interesting list of objectives for literature and general reading which were arrived at with the coöperation of graduate students over a period of years and the high-school teachers of Los Angeles. Limitation of space does not permit a listing of these objectives.

The writer has made a canvass of secondary courses of study secured in 1927 from state departments of education and several of the largest city school systems in each state in order to determine the objectives emphasized in high-school English. The original wording of the course of study is maintained as nearly as possible in stating the objectives. The aims are arranged from highest to lowest, according to frequency of mention in the secondary programs of study analyzed. It does not follow that these statements are in all cases the most desirable aims of instruction in high-school English. However, the fact that officials of representative high schools distributed over a wide geographical area have seen fit to put into print such objectives indicates present trends and lines of emphasis in secondary English courses. The list of aims follows:

ENGLISH OBJECTIVES	FREQUENCY
English Composition	
1. Increase powers of expression	18
2. Develop ability to think clearly and honestly	5
3. Collect and organize material for a speech	3
4. General improvement of speech habits	3
5. Give training in artistic forms of expression	3
6. Understand and apply means which aid in securing vividness	2
7. Write a courteous letter according to forms in general use	2
8. Ability to think on one's feet	1
9. Afford opportunity to do imaginative writing	1
10. Create feeling for style through use of good models	1
11. Cultivate spirit of fairness and coöperative effort in class criticism	1
12. Develop ability to answer questions definitely and clearly	1
13. Develop ability to criticize own composition	1
14. Develop ability to join informal discussions without wandering from point	1
15. Develop ability to read aloud in such a way as to convey author's thought	1
16. Develop ability to compose on first draft a clear, readable paragraph	1
17. Develop ability to present in outline form a lecture or piece of literature and to write an expansion from such an outline	1

[2]Franklin Bobbitt, *Curriculum Making in Los Angeles.* Supplementary Educational Monographs, No. 20. Chicago: Department of Education, University of Chicago, 1922.

18. Develop ability to plan and work out a theme on some subject—literary, scientific, or commercial ---- 1
19. Discover and develop special ability ---- 1
20. To develop powers of persuasion ---- 1
21. To listen attentively and courteously, and judge speech within comprehension ---- 1
22. Teach courtesies of social conversation ---- 1
23. To speak *to* and not *at* audiences ---- 1
24. To present a talk with ease and confidence ---- 1
25. To preside over a meeting with ease and dignity ---- 1
26. To participate in informal discussions courteously and in complete sentences 1
27. Read aloud clearly, accurately, with appreciation of author's feeling ---- 1

English Literature

1. Ability to read with intelligence ---- 7
2. Improving pupil's taste in reading ---- 7
3. Familiarize pupil with a considerable body of the best literature as an expression of ideals and traditions ---- 5
4. Ability to find pleasure in reading books by the better authors ---- 4
5. Arouse admiration for good language and effective expression of ideas ---- 4
6. Develop power to understand, feel, and appreciate ideas and emotions of others ---- 3
7. Develop power of accurate and rapid silent reading ---- 3
8. Furnish ideals ---- 3
9. Establish the habit of weighing passages of especial significance ---- 3
10. Training for wholesome enjoyment of leisure ---- 3
11. Basal for other subjects ---- 2
12. Interpretation of problems of thinking and conduct that one meets daily ---- 2
13. Knowledge of a few of the greatest authors ---- 2
14. Provide a means of exercising pupil's healthy emotions ---- 2
15. Interpret orally for self and for others the meaning of the printed page ---- 2
16. Understanding of leading feature in structure and style of main literary types ---- 2
17. Worthy use of leisure time ---- 2
18. Character development ---- 1
19. Control of fundamental processes ---- 1
20. Cultural value ---- 1
21. Ethical value ---- 1
22. General acquaintance with field of belles-lettres ---- 1
23. Opportunity to express individuality through attempting literary types ---- 1
24. Power to enter imaginatively into thought of an author ---- 1
25. Preparation for college ---- 1
26. Skill in cursory reading ---- 1
27. Skill in careful reading ---- 1
28. Skill in consultation of literature ---- 1
29. Social value ---- 1
30. Set standards for future reading and writing ---- 1
31. Training for efficient work ---- 1

English (oral)

1. Increased accuracy, fluency, and effectiveness in writing and speaking ---- 7
2. Instill desire to read inspiring and informational authors ---- 6
3. Cultivate high ideals through literature adapted to grade ---- 5
4. Enjoy good books through stimulating imagination and emotions ---- 3
5. Cultivate desire to speak well ---- 2
6. Give opportunity for individuality in choice of books ---- 2
7. Call into action all powers of girls and boys ---- 1

8. Develop habit of thoughtful reading	1
9. Encourage individual thinking	1
10. Inculcate healthy interests	1
11. Inspire high ideals	1
12. Increase comprehension and rate of reading	1
13. Rapid silent reading	1
14. Talk courteously	1
15. Worthy use of leisure time	1
16. Use as tool of acquisition	1

English (written)

1. Increase power of clear and accurate expression	6
2. Make the misspelling of common words an uncommon occurrence	3
3. Develop sentence sense, emphasizing sentence structure	2
4. Enlarge and clinch knowledge of elementary principles of grammar	2
5. Mastery of technicalities	1
6. Make the use of good English habitual	1

Grammar

1. To enable correction of habitual grammatical errors in oral and written speech	1

Penmanship

1. Aid pupils to make good forms	1
2. Help acquire regular rhythmic movement	1
3. Help pupils acquire speed necessary for commercial work	1

Public Speaking

1. Afford training in expression	2
2. Ability to think clearly before an audience	1

Reading

1. Continue habits of effective study	1
2. Discriminate between good and bad literature	1
3. Proper use of leisure	1

Spelling

1. Acquaint pupil with principles of good word building	1
2. Render habitual the spelling of words in common use	1
3. Inculcate pride in good spelling	1

ENGLISH AS A CONSTANT OR REQUIRED SUBJECT

It is a matter of some interest to note the extent to which English is a required subject. Tryon, Smith, and Rood[3] have recently reported an analysis of the curriculum in seventy-eight junior high-school centers. Table I reports the results of their investigation of the subject of English.

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[3] R. M. Tryon, H. L. Smith, and Allan F. Rood, "The Program of Studies in Seventy-eight Junior High School Centers." *School Review*, XXXV (February, 1927), pp. 96-107.

TABLE I—ENGLISH COURSES OFFERED IN SEVENTY-EIGHT JUNIOR HIGH-SCHOOL CENTERS

COURSE TITLE	GRADE VII		GRADE VIII		GRADE IX	
	CONSTANTS	VARIABLES	CONSTANTS	VARIABLES	CONSTANTS	VARIABLES
ENGLISH	78	7	78	22	78	26
English	72	2	73	7	77	3
Reading	13	0	4	0	1	0
Literature	0	0	8	1	2	0
Spelling	19	4	15	5	0	6
Penmanship	30	5	24	12	2	19
Expression	1	0	1	0	1	0
Grammar	6	0	2	0	0	0
Composition	0	0	2	0	1	0
General language	1	0	1	0	0	0
Dramatics	0	0	0	2	0	3
Business English	0	0	0	1	0	1
Library	0	0	0	0	0	1
Public speaking	0	0	0	0	0	3
Word study	0	0	0	0	0	1
Journalism	0	0	0	0	0	1

The figures opposite the general heading, "English," do not represent totals of the different subdivisions, since a given school may offer more than one type of English work. For example, all schools, seventy-eight in number, offer English, but some centers offer other types of English work in addition.

Tryon, Smith, and Rood tabulated the courses under the exact titles used in the courses of study. Where a course was required of all pupils in the school, it was tabulated as a constant; otherwise a given course was tabulated as a variable or elective. The data of Table I indicate that some form of English is a universal requirement in junior high schools, while in a number of instances more than one type of English work is required of all pupils.

The writer made an analysis of the senior high-school curriculum similar to the study Tryon, Smith, and Rood made of the junior high-school curriculum in English. The same procedure was followed in tabulating the courses offered. Table II presents the results of the writer's analysis of the English courses offered in the senior high-school curriculum. Data were available for the ninth grade and were included for purposes of comparison. Table II is read in the same way as Table I, except that the figures opposite the general subject heading of "English" represent totals for the various subdivisions of the subject.

An examination of Table II indicates that English is required of all pupils in Grades IX, X, XI in the thirty senior high schools represented in the study. Some form of English work is required of all pupils in Grade XII in twenty-four of the senior high-school centers represented. The courses listed indicate a considerable range of elec-

tives offered in English. The data of Tables I and II emphasize the importance of English in the secondary curriculum, since the subject is universally required of all pupils in Grades VII-XI in the systems studied, and in most instances is required of all pupils in the twelfth grade.

TABLE II—ENGLISH COURSES OFFERED IN THIRTY SENIOR HIGH SCHOOLS

COURSE TITLE	GRADE IX		GRADE X		GRADE XI		GRADE XII	
	CONSTANTS	VARIABLES	CONSTANTS	VARIABLES	CONSTANTS	VARIABLES	CONSTANTS	VARIABLES
ENGLISH	31	20	30	13	31	23	24	53
Bible literature	0	1	0	0	0	0	0	0
Business correspondence	0	0	0	0	0	0	0	1
Business English	0	0	0	0	0	1	0	5
Business English and correspondence	0	0	0	0	0	0	0	1
Business letter writing	0	0	0	0	0	0	0	1
Commercial English	0	0	0	1	0	0	0	2
Debating	0	1	0	1	0	4	0	4
Dramatic art	0	0	0	0	0	2	0	1
Dramatics	0	1	0	0	0	0	0	5
English	30	0	30	0	30	0	23	7
English literature	0	0	0	0	0	0	0	1
Expression	0	0	0	1	0	2	0	1
Expression or debate	0	1	0	1	1	1	1	0
Extemporary speaking	0	0	0	0	0	0	0	1
Journalism	0	0	0	0	0	3	0	9
Language	0	0	0	1	0	1	0	1
Modern literature	0	0	0	0	0	0	0	1
News writing	0	0	0	0	0	1	0	0
Nineteenth and twentieth-century literature	0	0	0	0	0	0	0	1
Oral English	0	0	0	0	0	0	0	1
Oral expression	0	1	0	0	0	0	0	1
Oratory	0	0	0	0	0	0	0	1
Penmanship	0	10	0	4	0	2	0	2
Public speaking	0	1	0	2	0	4	0	4
Religious education	0	0	0	1	0	1	0	0
Senior grammar	0	0	0	0	0	0	0	1
Spelling	1	3	0	1	0	0	0	1
Word study	0	0	0	0	0	1	0	0
Writing	0	1	0	0	0	0	0	0

THE EVOLUTION OF SCHOOL SUBJECTS

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The field of subject matter available for man to study is limited by his environment and his reactions to that environment. Other subjects will surely spring from his further insight into the things and processes about him, but it is hardly conceivable that these will not be chiefly a reconditioning and a reorganization of materials of which he is now vaguely conscious. It is unlikely that there remain any essentially virgin fields. Even though superficially, man has canvassed his environment.

Man is the only living creature consciously devoted to organization. Moreover, man is the only living creature consciously devoted to bequeathing his spiritual achievements to posterity. In long-gone nebulous times he carved pictures on cavern walls in order that other men, then and possibly in time to come, might know of what he had been thinking. So began writing. Things were about him in quantity—two reindeer, three nights, five men. Everywhere and at all times number! Survival was for him who regarded number. Slowly out of his organizations of number the science of arithmetic took form. The heavens were above him. Slowly out of his reactions to the daily progress of the sun, the nightly presence of the stars, the varying recurrence of other celestial phenomena, astronomy emerged. There were always about him others of his kind. Man's greatness consists not alone in his thoughts, but in his expression of those thoughts to others. He has through long generations of effort organized systems of expression which we call "language." And so on throughout the list.

All permanent things mature slowly. The courses taught in the schools did not arrive till the race was old. These courses have been subject to slow change either in terminology or content. The curriculum attempts to comprehend the entire scope of human intellectual achievement, and new intellectual fields are gained only by long and patient toil or by subdivision of one of the established fields; and such cleavage, too, costs long endeavor.

SCHOOLING IN PRIMITIVE TIMES

It seems that the first subject taught in any organized way was writing. There is reason to believe that instruction in writing was available to men of the Cro-Magnon period. There was then no need to teach men to read. Since all writing was done by means of pictures, any one who observed could read. The picture of a man engaged in killing a reindeer told its own story.

Presently writing underwent a refinement which rendered it less obvious, and instruction in interpretation became necessary. The Egyptians 4,500 years ago wrote in characters distinctly reminiscent of the Cro-Magnon system, but which had acquired a brevity and a subtlety which required training of those who would read. Of the Egyptians, Diodorus Siculus said: "A little writing and reading were taught to all engaged in the industrial arts."

There is no evidence that the teaching of mathematics goes farther back than Babylon, about 3000 B.C. The Babylonians, with their contemporaries, the Egyptians, developed and taught geometry almost 5,000 years ago. The pressing need of building temples, pyramids, and systems of irrigation probably gave the science its original momentum. Arithmetic as a formal subject dates from Babylon, about 2000 B.C. The first record we have of algebra in an organized form places it in Egypt, 1700 B.C. The Babylonians probably introduced philosophy as a thing to be studied. It considered such matters as sorcery, magic, incantations. From the Babylonians came astronomy, astrology, and a study of mythological records which marks the crude beginning of literature. The Jews gave us theology, law, and probably hygiene. The Romans later reorganized and elaborated the Mosaic systems of law, and the Greeks made of hygiene a much more serviceable science. As far as is known, the Jews established the first definitely located schools—namely, their schools of the scribes. Shortly before the birth of Christ, Greek was added to the curriculum, as was organized study of the forms and practice of politeness. The Greeks contributed gymnastics, art, story telling, ethics, and civics (politics). Grammar, rhetoric, geography, and military training seem to have come from the Romans. The origin of grammar, however, is not definitely known, and some authorities place military training first in Greek schools.

GREEK, ROMAN, AND MEDIEVAL SCHOOLS

Greek Sophist schools taught rhetoric, astronomy, geography, political science, and Greek, and, in some instances, medicine. "Who," said Gregory Thaumatargus of his friend, Basil the Great, a student

in one of these institutions, "was to be compared with him in rhetoric? . . . Who excelled him in the understanding and practice of the Greek tongue? Who understood better the forms of meter or laid down the laws of poetry more exactly? Who went deeper in the laws of philosophy, both that high philosophy which holds its face upward toward the stars and that which is speculative and more concerned with the daily actions of life, as well as the third kind, which deals in oppositions and argument, and is called dialectic? Of astronomy, and geometry, and the properties of number he obtained such an insight that he could hold his own with the best; and with medicine, both theoretical and practical, he made himself thoroughly familiar."

The curriculum of the University of Alexandria, about 300 B.C., included grammar, rhetoric, poetry, philosophy, medicine, music, and mathematics. The practice of research seems to have developed in this institution. Martius Capellus, in the fifth century, refers to the "seven bridesmaids—grammatica, dialectica, rhetorica, geometrica, arithmetica, astronomia, and harmonia."

The first appearance of general history appears in Roman schools about the middle of the sixth century. Other nations had taught cross-sections of history. The Chinese, as far back as the record runs, had exhorted their young in the beliefs and activities of their ancestors; but the first attempt to present the records of all peoples was made by the Romans.

Alcuin established the study of orthography late in the ninth century. In the monastery schools, children were admitted at seven. They began the work of education proper by learning the psalter and the Latin rituals. It was an obligation for all monks and ecclesiastics to know these. They were, therefore, taken up first. When they had been mastered, the pupils entered upon the profane study of reading and writing, and *the trivium*—grammar, rhetoric, and logic. Then followed *the quadrivium*—music, arithmetic, geometry, and astronomy. Rhetoric was essentially a part of grammar, being composed of declamation and public speaking. In the nunneries Latin, grammar, and music were taught. In some schools there was a little Greek.

From the ninth century until the discovery of America, few, if any, additions were made to the curriculum. Whatever changes were made were in point of method rather than content.

COLLEGE SUBJECTS IN COLONIAL AMERICA

The omens of free education were favorable at the beginning of American schools. Luther and Calvin, in their different ways, had emphasized the function of universal education. It was Luther's

favorite doctrine that every child was worthy of the best available education. Calvin at Geneva in the sixteenth century made it obligatory, as far as he might, to make education available to every child. These influences were present in America at the beginning. The era of democratic education had begun. But, curiously, the democratic spirit was expressed in administration rather than in curriculum content; for instance, the insistence upon Latin in the schools of Colonial New England was not less rigorous than that in the schools of the mediæval period. The first school in New England was a Latin-grammar school. The first college was Harvard. The following table indicates the first schedule of classes organized at Harvard:

EARLIEST HARVARD SCHEDULE[1]

FIRST YEAR

Monday: Logic, Physics, Disputes.
Tuesday: Logic, Physics, Disputes.
Wednesday: Greek Etymology, Syntax, Precepts of Grammar in such authors as have variety of words.
Thursday: Hebrew Grammar, Bible Practice, Eastern Tongues.
Friday: Rhetoric, Declamations once monthly.
Saturday: Divinity, The Catechetical, History, Nature of Plants.

SECOND YEAR

Monday: Ethics, Politics, Disputes.
Tuesday: Ethics, Politics, Disputes.
Wednesday: Greek Prosodia and Dialects, Poesy.
Thursday: Chaldee.
Friday: Rhetoric, Declamations once monthly.
Saturday: Divinity, The Catechetical, History, Nature of Plants.

THIRD YEAR

Monday: Arithmetic, Geometry, Astronomy, Disputes.
Tuesday: Arithmetic, Geometry, Astronomy, Disputes.
Wednesday: Composition, Imitation, Epitome, both in prose and in verse. "Perfect their theory of writing and exercise style."
Thursday: Syriac, Trostius, New Testament.
Friday: Rhetoric, Declamations once monthly.
Saturday: Divinity, The Catechetical, History, Nature of Plants, Commonplaces.

It will be noted that Latin is not taught; it was excluded on the ground of having been mastered prior to entrance. As late as nineteen years after its founding, in 1636, Harvard published the following entrance requirements:

When any scholar is ready and able to read Tully, or any classical Latin author, *ex tempore*, and make and speak true Latin in verse and prose, and decline per-

[1] Taken from Meriwether's *Our Colonial Curriculum*.

fectly the paradigms of nouns and verbs in the Greek tongue, then he may be admitted to the college; nor shall any claim admittance before such qualification.

The conversational use of Latin was obligatory upon all within the limits of the college. It was expressly required that the mother tongue was to be used "under no pretext whatever unless required in public exercises." The course at this time consisted of four years of Greek, two of logic, two of ethics, two of politics, and one each of arithmetic, geometry, Hebrew, Chaldee, and Syriac. History was taught during the winter and botany during the summer. For the first degree, corresponding to our bachelor's, it was ordered that "every scholar that on proof is found to be able to read the originals of the Old and New Testament into the Latin tongue, and to resolve them logically; withal being of godly life and conversation; and at any publick act hath the approbation of the overseers and master of the colledge, is fit to be dignified with the first degree." The second degree was awarded to those who could "give up a system or synopsis or summe of logic, natural and moral philosophy, arithmetic, geometry, and astronomy, and defend his thesis." About 1710 Latin ceased to be required in conversation, and Virgil and Cicero became a part of the course. Chaldee and Syriac were omitted, and geography and physics added.

Just prior to the Revolution an attempt was made to put the courses offered in Harvard into a definitely organized and articulated form. All instruction was thrown into four groups: (I) Latin, (II) Greek, (III) logic and metaphysics, (IV) mathematics and natural philosophy. This marks the advent of natural philosophy into the program of the school.

The Harvard curriculum was largely typical of all curricula—public, private, or collegiate. The College of William and Mary taught Latin, Greek, philosophy, mathematics, oriental languages, divinity, and moral philosophy. Yale offered approximately the same, except that early in the eighteenth century a crude course in electricity was offered.

THE ELEMENTARY AND SECONDARY COLONIAL SCHOOLS

Reading, writing, and arithmetic composed the body of the elementary-school course. Latin and Greek were the dominating forces in the Latin-grammar school. The background of all school work was religion. All subjects were stated in terms of the doctrines of the church. The leading schoolmasters were fervently religious. Men of the type of Ezekiel Cheever, William Tennent, and Christopher Dock were steeped in the Scriptures; they were men in whom schol-

arship and piety were solidly linked. These devout men, acting upon the peculiarly receptive conditions of the times, put into the teaching in the schools a religious impression that has not been effaced. The spirit of their teaching was expressed in the texts which were used. Usually the text in reading for children above ten years of age was the Bible. Of the 168 pages of Benezet's *Speller*, 148 were devoted to the Bible and religious teachings. The *New England Primer* had all of the atmosphere of the New England Sabbath. One of the earlier educational laws of the colonies required that all children should be "trained in all scholasticall, morall, and theologicall discupline."

In 1768 an elementary school at Providence listed its offerings as: "Reading, writing, accounting, pronouncing and properly understanding the English tongue, the various branches of arithmetic, and the learned languages." A New York school offered in 1730: "Reading, writing, ciphering, merchants' accounts, Latin, and Greek." In 1750 Benjamin Franklin evolved a very comprehensive scheme for elementary education. It was to cover six classes, or grades, and contain reading, writing, spelling, history, natural science, composition, letter writing, ethics, chronology, geography, logic, literature, grammar, public speaking, and navigation.

In 1753 the first president of the University of Pennsylvania stated that the English language, writing and figuring, and a short system of religious and civil truths was all the education that was necessary for the common run of people. This Meriwether calls "an early instance of the aristocratic feeling in education." The *One Hundred Necessary Rules of Conduct* was published in 1764, and thereafter afforded subject matter for the numerous courses in "politeness" that appeared in school programs. In 1783 Noah Webster published the text which subsequently came to be known as the "Blue-Back Speller." It stands today with the undisputed record of being the most successful American school text. It gained immediate favor in the schools and gave a tremendous impetus to the study of spelling. This impetus, along Websterian lines, still persists in the schools of many rural sections.

THE DEVELOPMENT OF SCHOOL SUBJECTS IN AMERICA

Latin at first dominated the educational advantages offered in American secondary schools and colleges. But the days of its ascendency even then were numbered. Ratich, a German educator, during the Reformation had openly advocated stress on the mother tongue. "Is it not pitiable," harshly inquired Martin Luther, "that a boy has been obliged to study twenty years to learn enough bad Latin to read

the mass and become a priest?" Comenius entertained similar misgivings. On the other hand, Locke and Milton held that it was best to keep this dead language for the use of the cultivated class. Thus "the glamour of tradition and the sanctity of sacerdotalism clogged and blunted the sharpest wits of the time." Centuries of unthinking ecclesiasticism had so identified Latin as the major element of education that the process of disillusioning was long and painful. The process has met with little assistance from the rank and file of the teaching guild. They have been ingrained with conservatism. Their thoughts are in the past. They love the road they have traveled. The consciousness of their stewardship of the mists of antiquity profoundly affects their educational practices.

But the ideas planted by Ratich, Luther, and Comenius began to bear fruit early in the nineteenth century. As has been noted, the era of science was at hand, particularly in American schools.

The birth of geography as a study of world importance occurred in 1492. Prior to the embarkation of Columbus on his momentous voyage men's minds were held within the shadowy limits of a constricted area. Barnard, however, observes that though America was innocently the cause of great development in this branch, its schools for a long time spent little energy upon it. Frequently the only instruction given in geography was included in mathematics and astronomy. Noah Webster stated that no formal geography was studied before the publication of Morse's *Geography* in 1784. This book was bright and readable, and accomplished much in introducing an important study into early schools. Later the study of geography was stimulated and modernized by Arnold Guyot, a Swiss who had studied under Ritter in Germany, but who migrated to America in 1848. He was employed by the Massachusetts Board of Education during the ensuing six years as an institute lecturer. In 1854 he was elected Professor of Physical Geography at Princeton. Colonel Francis W. Parker reënforced Guyot's contribution by a book published in 1887 called "How to Teach Geography." This was essentially an application of Pestalozzian principles to Guyot's texts and teachings. Geography was included in all of our curricula by 1890.

Natural history was for many years the inclusive science, comprising even chemistry, physics, and astronomy. It later became restricted to minerals, plants, and animals as objects of observation, but not of experiment. Biology, which began with Huxley, was narrower, being based upon comparative studies of the phenomena of life. The sincerely scientific attitude became manifested in American colleges through the study of life forms and processes by 1870. Harvard and

Yale had carried science in one or more courses since 1660. There are on record orders made for materials and apparatus for the Harvard laboratory, the oldest of which is dated 1731 and makes requisition for almost $600 worth of equipment. In 1764 the laboratory was destroyed by fire. It was replaced in 1779, and the order, though placed in troublous times, suggests that Harvard must have supplemented its instruction in science with a very creditable laboratory. Details of this order are stated in Meriwether's *Our Colonial Curriculum*. The first professorship of botany was in Columbia College; it was held by Dr. David Hosack, who later established the first scientific journal published in America. Zoölogical science was unorganized and at random until Darwin published his findings a little later than the middle of the nineteenth century. The industrial applications of chemistry and physics which developed late in the nineteenth century have placed these sciences in every high-school course—indeed, with primary adaptions, as far down as the intermediate grades. The vast mineral exploitations have given to geology a creditable standing as a science. The invention of the compound microscope has opened new realms in the study of most sciences, particularly in biology.

Another characteristic of recent educational thought is implied in the emphasis placed on modern language studies. Almost currently with the decline of Latin and Greek came the demand for an ostensibly more practical language. Columbia established a chair of French in 1779 and placed it in charge of Charles Bellini. In 1784 Columbia established a chair of German. In 1782 William and Mary had provided for a chair of French and German jointly. Williams College established chairs of French and German a quarter of a century before it made similar provision for Greek and Latin. It must be stated, however, that very little French and German were studied in America before 1825. These modern tongues were more hospitably received in Southern than in Northern schools. Lafayette College took the lead in the practical study and application of the newer language curriculum. Spanish and Italian appeared about 1825. The more intimate relationship with other countries, both socially and industrially, were great incentives toward the organizing of these courses. Rhetoric, composition, grammar, and literature merged into "English" about 1880.

Very early in its career Harvard offered history for one hour of Saturday afternoons during half the year. This history was largely ecclesiastical. No considerable advance in history was shown before 1800. Harvard, Yale, Williams, and Columbia were the only institu-

tions to take history seriously before 1812. In 1835 Francis Lieber, a political refugee from Germany, was elected to the chair of history and political economy in the University of South Carolina. Boone says of him: "His influence in directing the educated mind and in bringing about a rational view and presentation of the living, fruitful facts of history has been of inestimable service." The first professorship of modern history was established at Harvard in 1839. The greatest service in the establishment of history in American curricula was rendered by Doctor Andrew D. White, of the University of Michigan, and later for twenty years president of Cornell.

Columbia and William and Mary established courses in political economy in 1817. The University of South Carolina, Harvard, and Yale were next in order. It must be stated, though, that the metaphysical treatment of the study left it barren of any real insight into institutional life. The first organized effort toward the vitalization of these courses was made in the decade 1880-1890.

Shortly following 1875 there was much shifting in curriculum terminology. As has been noted, composition, grammar, rhetoric, and literature were grouped under the generic heading of English. So the science of government and civil government became civics. Mental philosophy, moral philosophy, ancient geography, logic, classical antiquities had practicaly disappeared by 1890. Most of natural philosophy was gradually included under physics. Bookkeeping, commercial law, and commercial arithmetic appeared about 1885. Industrial and vocational courses began to emerge about the same time. Meteorology, mineralogy, mechanics, and electricity yielded to more appropriate titles. The decline of Greek was rapid after 1890. At this time physiology was at its height, only to give way subsequently to hygiene, health, and sanitation. About the same time nature study arose from the remains of natural history.

Vocational education, although chiefly developed during the current century, can be traced back in various crude forms at least two hundred years. In 1646 the Marquis of Worcester, while imprisoned in the Tower of London, gave orders that a school be erected wherein "boys might learn something of the principles of the mechanic arts." Unfortunately, the order was never discharged. In 1676, in a book entitled *How to Outdo the Dutch Without Fighting an Englishman*, Andrew Yarrington wrote:

> Inasmuch as we canot fight on the seas, as our boats are inferior to those of the Dutch, if we are to exist at all, we must sharpen the wits of our people. I suggest that we get a good man from Freiburg to put us in the way of making

tapes, and bring over two engines, one for narrow and one for broad tapes, with wheels to spin. Send to Dort, in Holland, for one man to put us in the way of treating the fine threads, and for a spinning mistress from Germany to govern the little maids and instruct them in the art of spinning; for a man from Haarlem, in Holland, to whiten your tapes and threads; and if you do this, you will become masters of weaving, as Manchester is in all things it trades in.

In America there was a great interest in agriculture following the Revolution, but only here and there did this interest find expression in instruction offered in the schools. In 1821 an agricultural school was established in Maine, and one in Connecticut in 1824. The Michigan Agricultural College was established in 1857. The Morrill Land Grant Act, and later the enactment of laws creating experiment stations in connection with state universities, added momentum to the development of the science. Presently this interest penetrated into the secondary level, and the first agricultural high school was established in Minnesota in 1888. By 1920 a thousand high schools were offering instruction in agriculture. Since 1900 the term "agriculture," while still holding for the general field, has been partitioned off into agronomy, soils, field crops, animal husbandry, poultrying, dairying, sanitary engineering, and the like.

Courses in sewing were taught in the lower grades in Boston in 1854. The first curriculum in domestic science was offered in Iowa State College in 1872. The term "domestic science" was soon replaced by home economics. Specific courses taught in this group are: cookery, food chemistry, dietetics, textiles, house furnishing and decoration, care of the sick, sewing, and the like.

WHAT ONE CHILD READ, AND WHY

ROSEWELL G. LOWREY
Blue Mountain College

Whatever the future vocation of the child may be, nothing that he can acquire in school will bring him greater pleasure and profit than the habit of reading worth-while books. As is the case with most habits at which we aim in the educative process, this one is complex. It involves the ability to enjoy reading, the habit of reading, the ability to discriminate between books on the basis of value, the habit of so discriminating, and the habit of choosing for reading those books which one judges to be of greatest value. These abilities and habits are interrelated, but the possession of one does not necessarily involve the possession of the others. They are progressive in nature, and exist in children in varying degrees of development.

Educators assume that children are seriously hurt by reading certain kinds of books. Stone[1] says: "Probably more juvenile criminals have resulted from secretly hidden copies of *Nick Carter, Diamond Dick,* and the like, than from any other source." Elizabeth Smith[2] puts it more mildly: "Unguided reading is likely to be of very little value . . . in the child's development." Raymond[3] does not take issue with these statements, but says that interest is of primary importance. He is willing to start a boy on *Diamond Dick,* if by so doing he can arouse interest.

Bonnie Gilbert,[4] at the Chattanooga High School, tried the experiment of letting children read what they pleased, only seeing that they came into contact with good books. She thinks that they gradually developed better taste and "climbed the reading stairway."

Out of a vast amount of experimentation and thinking, certain definite principles of procedure are crystallizing. Mr. Hatfield[5] summarizes the best thought on the problem briefly.

On one item, at least, teachers seem fairly well agreed. Educa-

[1]Charles H. Stone, "The Teacher and the Children's Reading," PEABODY JOURNAL OF EDUCATION, September, 1923.
[2]"A Plan to Encourage Home Reading," idem.
[3]Charles Harlowe Raymond, "Turning the Captives Loose," English Journal, February, 1925.
[4]"An Experiment in Freshman Home Reading," PEABODY JOURNAL OF EDUCATION, January, 1924.
[5]W. Wilbur Hatfield, "English in the Junior High School," English Journal, May, 1925.

tional psychology has taught us that attitude is of great importance in habit formation. It is, therefore, almost, if not quite, useless to force children to read that which they dislike. A child likes a book because of something in its content or viewpoint which is at his level—which appeals to his instinctive desires. If we want to teach him to like the things we like, we must begin at his level.

Believing that my boyhood likes and dislikes were not different, in the main, from those of other days, it is my purpose in this article to set down certain reading experiences of my own, with the hope that something of value may be learned from them.

My early reading background was that of the usual child. It included *Mother Goose* (much of which I memorized), the story of *The Three Bears, Little Red Riding Hood, The Three Little Pigs*, and similar classics. My mother read much to me from the Bible, and later required that I read it to myself. I always enjoyed hearing her, but was invariably miserable when I was set down on Sunday afternoons to a certain number of chapters which must be finished before I could play.

Of the reading of these earlier years I have little detailed memory and little chronological conception. Two books stand out. They were *Swiss Family Robinson* and the *Young Marooners*, both of which my mother read to me at night after I had been tucked into bed. Certain scenes from them are still vivid.

Probably the most profound reading experience of my childhood came to me when I was nine years old and in the fourth grade. The school had a library of about five hundred volumes, kept on homemade shelves in a small room adjoining the classroom. One afternoon, as a reward of merit, I was permitted to go to the library, select anything I wished, and read for an hour. As I had never before won such a distinction, I faced the seemingly measureless numbers of books with mixed feelings of elation and trepidation. The volumes were of varying sizes and colors. Some of them were old and worn; some were new. If I had been able to see them separately, possibly I should have recognized some friends; but the honor and the responsibility had dazed me.

While I stood bewildered, an older boy came into the room, sent perhaps by a knowing teacher. He took from one of the shelves a large green volume with a title in letters of gold and opened it. I saw a picture of a knight in armor mounted on a white horse. Then he put the book back on the shelf.

"That's a good one," he said. "Why don't you take it?"

I did. It was a collection of Arthurian legends. The next hour

was packed with thrilling adventures for me. That night I told my younger brothers about the book. The next day I told my friends. And at the earliest opportunity I returned to its reading. The Arthurian legends became the breath of our life. We boys organized a round table. One girl was admitted to the group, and by unanimous consent she became Queen Guinevere. Each boy took the name of a favorite knight. We made swords and lances of hickory sprouts, and shields from the tops of fifty-pound lard tins. We seldom met without the salutation, "Wilt joust, Sir Knight?" followed by the clash of swords and the ring of spear on shield.

Out of that book and the months through which I lived its spirit came ideas and ideals which still affect my actions.

My next outstanding reading experience came two or three years later with the discovery of the H. G. Henty books. It is probably unnecessary to explain to many of my readers that the Henty books are historical novels, written for boys. The hero, always a lad of seventeen or eighteen, becomes an actor in scenes centering about some event such as the conquest of Mexico by Cortez, Clive's campaigns in India, or the American Civil War. During the course of the story the boy so distinguishes himself as to receive the confidence and esteem of his chief—Cortez, Clive, etc. Frequently he is dispatched on some secret mission that carries him through many exciting adventures quite apart from the actual historical events.

For a period of eighteen months or two years the reading of these books was my principal leisure occupation. I often neglected both school work and out-of-door exercise for them. Many afternoons my mother found it necessary to interfere, sending me out to play; many nights she thought it wise to order me to stop reading and go to bed. I have no definite idea how many of these books I read—probably several score—but they did not constitute my only reading. I sampled other juvenile works, including Alcott's *Little Women*, and something by Horatio Alger. I did not like them. I also read some best sellers, of which I remember *Brewster's Millions* and the *Little Shepherd of Kingdom Come*, but nothing gripped me like Henty.

Why? I think there were several reasons. The books introduced me to strange lands and strange times. They gave me a vicarious speaking acquaintance with great men of history about whom I had previously heard. They were stories of action—of adventures such as I should have enjoyed having. They modernized the spirit of chivalry. Probably, too, the illusion of reality was increased by the use of genuine historical settings and characters; and I am sure that I

found it easy to identify myself with the hero—easier than it would have been had he been a mature man.

Was this period in my development worth while? Decidedly so. I have long ago outgrown (I hope) any false conceptions of history and any false psychology that Henty may have given me. If permanent harm was done, it was due to my spending too much time indoors with books. On the other hand, I gained certain important and definite things. I came to feel that books were my friends and the greatest possible source of pleasure and of information. I acquired the habit of reading in my leisure time. I believe I made progress in discrimination. I remember telling another boy that Henty was superior to Alger, because one could not learn anything from Alger.

Yet it would have been a pity if I had never progressed beyond Henty. I think my mother was wise. She made no attempt to hurry me to levels of reading for which I was not ready, or to force me to read books not of my own choice. One afternoon I found that I had read all the Henty books in our home library. I therefore asked permission to go to the house of a friend to borrow a book.

"I think there is something here you will like," my mother told me.

I had just read *In Freedom's Cause*, a Henty book dealing with Bruce's fight for Scottish independence. Mother brought me Jane Porter's *Scottish Chiefs*.

"See what you think of that," she said.

I glanced through it. Familiar names caught my eye. In a little while I was engrossed. When I had finished the book, I told mother that Jane Porter was "as good as Henty."

She was ready with another suggestion. This time it was *Ivanhoe*, and that was followed by *Kenilworth*. Then a friend brought me another Henty book, but I found that it did not satisfy. There was a sameness about plot and character that had not before struck me.

I began to look among my mother's books for things to read. My search was rewarded by the finding of the *Tale of Two Cities* and *A Connecticut Yankee in King Arthur's Court*. Two new names had been added to my growing list of writers who could write what I would enjoy. I should never again be satisfied with books from a juvenile series.

What conclusions of general validity may be drawn from my experience?

I think it likely that my own craving for historical material is felt by many children. Possibly many boys like the same types of heroes

and adventure that I liked, but I believe the following rules are universally applicable:

1. Juvenile series books, at least of the better class, are better reading than many teachers have supposed. Such false ideas as they may contain are usually outgrown quickly enough when the child comes into contact with something better. Books of the juvenile series type are likely to meet a real need, and valuable habits and attitudes may be acquired through reading them.

2. Let children read what they like, in order that they may learn to love reading—that they may get the reading habit.

3. Read what the children read, in order to find out what they like.

4. Be watchful and ready with suggestions that will elevate the plane of their reading.

"If [when children read 'trash'] instead of lifting our hands in horrified 'Let it alone,' we had . . . applied ourselves to finding out how we could use the craving . . . as a physician uses the symptoms of a disease, . . . we should have discovered what better literature we could have prescribed."[6]

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[6]Fannie M. Clark, "Teaching Children to Choose," English Journal, March, 1920.

THE NEW BOOKS ON OUR SHELF

Tennis for Women. By LOU EASTWOOD ANDERSON (University of Washington). New York: A. B. Barnes & Co., 1926. Pp. 150. Price, $1.60.

This book is lacking in good illustrations. The pictures are of students who are improperly dressed for the drill exercises—a fact which detracts from the book. The text is satisfactorily presented, and should offer considerable help to teachers of tennis. A. D. B.

The Applied Psychology of Reading. By FOWLER D. BROOKS (Johns Hopkins University). New York: D. Appleton & Co., 1926. Pp. xvii + 278. Price, $1.80.

A book in simple language, free from technical terms, and unified in organization, which presents clearly topics that have previously been treated by many writers on the subject. It has much less of new materials and of thoroughness than its own statements would indicate. P. W. ALEXANDER.

Abnormal Psychology: When the Other-One Astonishes Us. By MAX F. MEYER (University of Missouri). Columbia, Mo.: Lucas Brothers, 1927. Pp. viii + 278.

This book consists of a condensation and extension into abnormal behavior of the author's well-known "Psychology of the Other-One," and it embodies an attempt to clarify, by an objective, simple handling, the data usually included in texts on abnormal psychology. The treatment is deductive and at times somewhat dogmatic. This is, doubtless, due to the aim of the author to make the book suitable for use in a first course (for medical students). One misses the complete list of references and the statements of methods by which facts are obtained which should properly characterize objective psychology. The attempt to clear abnormal psychology of subjective terminology and explanations is a commendable one. J. P.

The Animal Mind: A Textbook of Comparative Psychology, Third Edition. By M. F. WASHBURN (Vassar College). New York: Macmillan Co., 1926.

This edition, containing bibliography of over a thousand titles, reviews and organizes from the author's point of view most of the experimental work on animal behavior. The present edition contains but slight changes in point of view. Among the additions to the earlier volume is a short treatment of the work of the *Gestalt* school of psychologists in Germany and a new theory of the nature of the drive in learning. The book should be in the hands of every serious student of comparative psychology. J. P.

Farm Projects and Problems. By KARY CADMUS DAVIS (George Peabody College for Teachers). Philadelphia: J. B. Lippincott Co., 1927. Pp. ix + 539. Price, $1.40.

A book that really analyzes the farmer's job. Questions are asked and concretely answered. The correlation with other school subjects is sincere and not strained. The units are mostly for *a day's work,* hence exceedingly practical. From organization to typography the book renders ceaseless aid to the busy teacher of vocational agriculture. H. A. W.

Adult Education. By JOSEPH H. HART. New York: Thomas Y. Crowell Co., 1926.

There has been a great deal of talk in recent years concerning adult education. Most of this talk comes from groups of people who are particularly interested in rather narrow and specific phases. Illustrations of this lie in the movement for the elimination of illiteracy, in the education of our foreign population for citizenship, in the rehabilitation of the disabled, in vocational education, such as is undertaken by the United States Department of Agriculture, and in similar movements.

It is distinctly encouraging to find here a book which finds for adult education a real place and meaning lying over and beyond any one of these or even the sum total of such movements. Dr. Hart has attempted to interpret the vision of education as a continuous process, extending from the cradle to the grave. He points out vividly the dangers of assuming that an education is complete at the close of a high-school or college course. If, in places, his work partakes of the nature of a diatribe against our present educational practices, and if he is led to sing a perhaps rather undiscriminating pæan of praise concerning the Danish folk schools, it still leaves the impression of an earnest attempt to consider broadly the real tasks of education, both as a means of preserving institutions and as a means of building a higher civilization. N. F.

Practical Psychology. By EDWARD S. ROBINSON (University of Chicago). New York: The Macmillan Co., 1926. Pp. xiii + 479

This is a simple and practical presentation of the elementary facts of psychology in a manner that is designed to interest the general reader who desires to know what the science of psychology is doing. It is also useful to the student beginning the study of psychology, though over-simplicity results in a number of places in somewhat erroneous statements. J. P.

Extra-Curricular Activities. By JOSEPH ROEMER and CHARLES FORREST ALLEN. New York: D. C. Heath & Co., 1926. Pp. x + 333. Price, $2.

Children help to educate each other. This has always been true, but not always recognized by teachers. Only in recent years have educators attempted to capitalize the informal, social activities of boys and girls for their educational advancement. A new philosophy of education with respect to the utilization of these leisure activities of children has been accepted. Some of the larger values of the educational program are the result of active participation in what is known as extra-curricular activities. The values accruing from extra-curricular activities may be thought of as the by-product of education. The best and most economical education for a child is that education which provides for guidance in all the activities in which he engages, curricular and extra-curricular. The authors of this volume make a genuine contribution. Extra-curricular activities are defined, and their relative values are determined. A constructive, progressive, and sensible plan of procedure is outlined. This program is not a theory. It has been tested and proved practical. Such important topics as the underlying principles of an extra-curricular activity program, home-room activities, assemblies, student participation in school control, club activities, citizenship, athletics, school publications, dramatics, high-school societies, and a score of other potent problems, are analyzed in this splendid book. It is full of suggestions and rich in concrete illustrations. Any review of this volume would be incomplete if it failed to mention the comprehensive bibliography on extra-curricular activities—probably the most extensive bibliography on the subject now available. H. L. D.

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Sex Differences in the Growth of American School Children. By EDWARD A. LINCOLN (Harvard University). Baltimore: Warwick & York, 1927. Pp. xii + 189.

The author has attempted "to gather and present evidence to determine the actual facts concerning sex differences during the growth period—first, in all phases of physical growth; second, in mental development; and, third, in various school accomplishments; . . . to point out the educational significance of the findings, and to offer such suggestions as may appear logically to grow out of these conclusions for the organization and administration of the schools." It is found "that girls are, in general, physically more mature in every respect than boys of a corresponding age;" that "there is no essential difference in the development of the general intelligence of boys and girls." Neither sex seems to be more variable than the other. The results of the study "indicate, in general, a definite superiority on the part of the girls in school achievement." A fact of the greatest educational significance is that "of the exceedingly great differences between individuals which appear in every trait which has been studied." The author has given a good summary of the experimental findings on this subject, but the results have hardly been brought up to date, no references being later than 1924. C. W. T.

Motion Pictures for Instruction. By A. P. HOLLIS. New York: Century Co., 1926.

The best feature is a comprehensive listing of films, educational and semi-educational in nature, available on a free, a rental, and a purchase basis. Age and grade placement by subject is worked out with much care. S. L. GIPSON.

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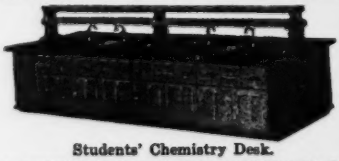

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